



The Water Report™

Water Rights, Water Quality & Water Solutions in the West

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THE REPUBLICAN RIVER COMPACT

CONFLICT & ARBITRATION

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INTRODUCTION

The Republican River Basin lies within the States Colorado, Kansas, and Nebraska (States). The Republican River Compact (Compact) was approved by an act of Congress on May 26, 1943, and apportioned the waters of the Republican River (57 Stat. 86). As with the majority of interstate water compacts enacted throughout the last century, conflict ensued. Disputes over Compact accounting of groundwater within the Republican River Basin ultimately resulted in the filing of an original action in the US Supreme Court (Supreme Court) in 1999.

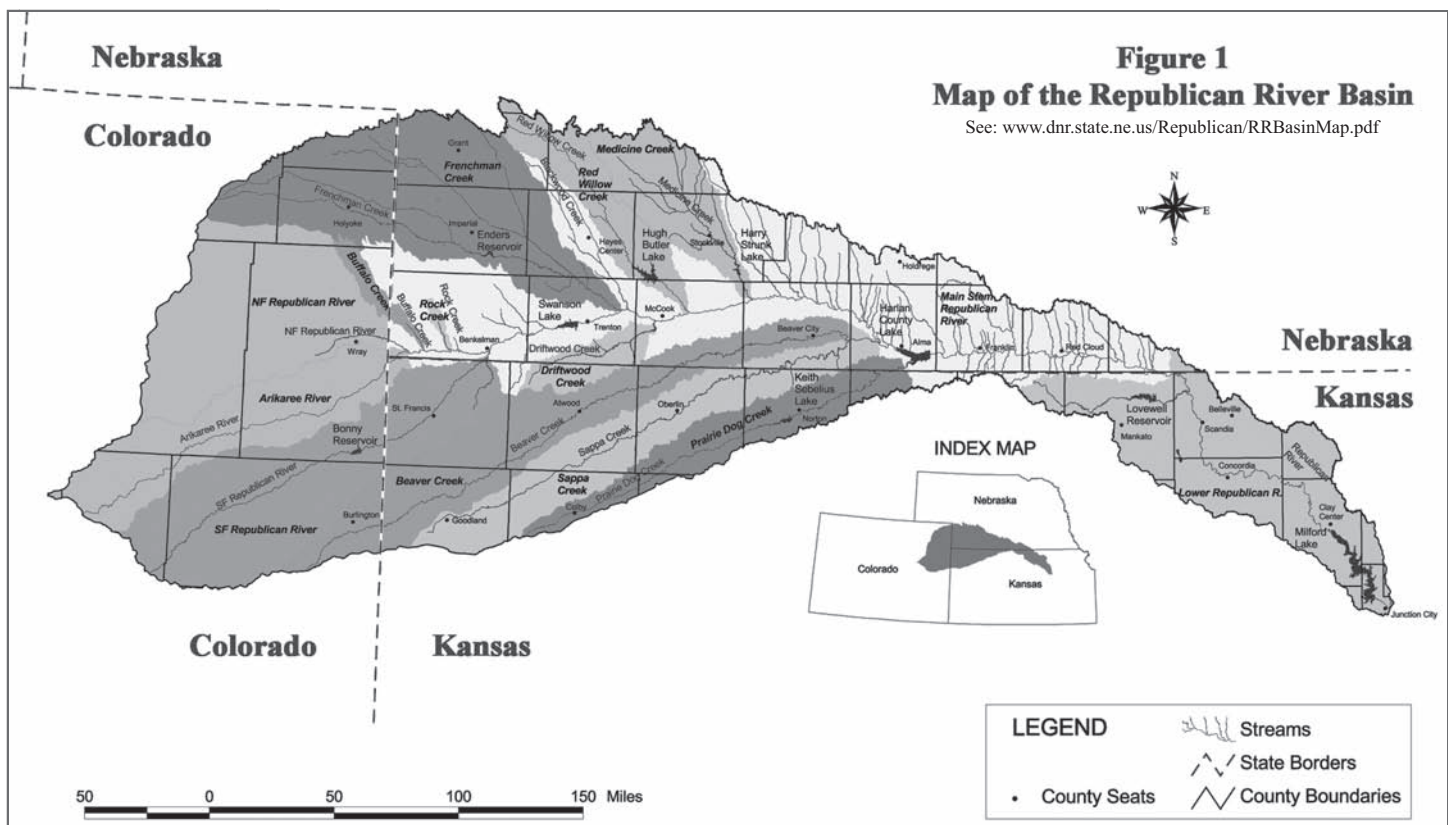
In December 2002, the States were able to negotiate a comprehensive settlement, which was approved by the Supreme Court. The States heralded the settlement as an extraordinary resolution designed to end the decades of disputes. The States worked within the Compact administration to implement the terms of the settlement. However, by 2006, disputes reemerged over compliance with the settlement and errors in Compact accounting.

The 2002 settlement required non-binding arbitration for disputes the States could not resolve within the Compact administration. On October 23, 2008, the States began their first arbitration proceeding. Under aggressive timelines, the States completed the arbitration and a final decision was issued on June 30, 2009. As the arbitration came to a close, two additional disputes reached a deadlock within Compact administration. Now, with the initial arbitration complete and two more arbitrations in progress, the States face a number of pathways which may be pursued to resolve their disputes.

GEOGRAPHIC BACKGROUND

The Republican River Compact defines the Basin as "all the area in Colorado, Kansas, and Nebraska, which is naturally drained by the Republican River, and its tributaries, to its junction with the Smoky Hill River in Kansas." (Compact, Art. II (1943)). The Republican River itself forms at the confluence of the Arikaree River and the North Fork Republican River, both of which rise from the high plains of northeastern Colorado. Twenty miles downstream from this confluence, the Republican River is joined by the South Fork Republican River. The South Fork also rises in Colorado, progressing along a northwest route, traversing the northwest corner of Kansas before crossing the border near Benkelman, Nebraska, and uniting with the Main Stem Republican River.

The geography of the Republican River and its tributaries creates an interesting dynamic for a water sharing arrangement between the three States. Both Kansas and Nebraska are required to maintain simultaneous upstream and downstream roles. The Arikaree River flows northeast from Colorado, enters the extreme northwest corner of Kansas, flows into the southwest corner of Nebraska near Haigler, and finally joins the Main Stem. As noted earlier, the South Fork plots a similar course that winds through Colorado and Kansas before entering Nebraska. Once these rivers connect with the main stem of the Republican River, the river flows east through south-central Nebraska and gathers flows from various tributaries. Several of the southern tributaries, such as Beaver Creek and Sappa Creek, rise in Kansas but flow into the main stem. Ultimately, the Republican River flows into Kansas once again near Hardy, Nebraska.



Multi-State Watershed

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Approximately 24,900 square miles of watershed in Colorado, Kansas, and Nebraska drain into the Republican River and its tributaries. Nebraska contains the largest percentage of the watershed (9,700 square miles or 39%), followed by Colorado (7,700 square miles or 31%) and Kansas (7,500 square miles or 30%). First Report of Special Master Vincent McKusick, p. 7 (January 28, 2000), in *Kansas v. Colorado & Nebraska*, No. 126, Original, US Supreme Court.

The Basin serves an active agricultural region which requires a reliable water supply. In 2000, agricultural purposes accounted for 90% of the area, or just under 2,000,000 acres of irrigated land. *Id.* at 8. However, this irrigated acreage represented only 12.5% of the total Basin area, or roughly 3,125 square miles. As early development progressed in the three States along the Republican River, a need to ascertain rights to its waters emerged.

HISTORICAL BACKGROUND

Pre-Compact Developments

An extended drought plagued the Republican Basin in the early 1930s. In the wake of the drought, a large-scale flood hit the Basin in 1935. The Basin percolated with ideas on how to control the flow of the river, as water supplies fluctuated between periods of severe drought and intense flooding. *Id.* (citing 87 Cong. Rec. 9606-07; Oral Arg. Tr. at 7-8). With President Franklin Roosevelt looking to develop federal public works projects, the federal government entered the scene. The federal government wanted to harness the Republican River so that large spring flows could be captured in reservoirs for flood control in the spring, and irrigation releases in the summer and early fall. *Id.* (citing H.R. Doc. No. 842, 76th Cong., 3d Sess. (1940)). At this point, the US Army Corps of Engineers (Corps) and the Bureau of Reclamation (Reclamation) began to analyze the potential for various water projects in the Basin.

The Corps recommended building a large reservoir along the Republican River near the Kansas-Nebraska border. Congress appropriated the funds in 1941 to build a dam and paved the way for the construction of Harlan County Reservoir. Harlan County Reservoir would eventually become the largest capacity reservoir in the Basin.

Meanwhile, Reclamation studied the possibility of building additional water projects within the Basin. While Reclamation produced favorable studies on the feasibility of federal water projects, it hesitated to begin construction until Colorado, Kansas, and Nebraska could reach an agreement on how to allocate the waters of the Basin. Reclamation wanted to avoid expensive litigation that may have resulted from conflicting water uses by the various States. It was particularly concerned about making a large-scale investment with these conflicts looming on the horizon. *Reclamation Project Investigation Report, No. 41* (1940). Concerned that any interstate quarrels might impair the long-term viability of its federal water projects, Reclamation held out on construction of any reservoirs until the three States could finalize an interstate compact to divide the Basin's waters.

Republican River Compact

Compact Guidance

"Virgin Water Supply"

Allocation

Delivery v. Allocation

Reservoirs

Formation of the Republican River Compact & Important Provisions

In 1940, the three States initiated negotiations to apportion the waters of the Republican River. Interestingly, although initial agreement on an interstate compact was reached in 1941 and approved by both houses of Congress in 1942, President Roosevelt vetoed the Congressional act on April 2, 1942, because the compact would have unduly restricted federal jurisdiction over navigation and water projects in the Basin (Second Report of Special Master Vincent McKusick, p. 8 (April 15, 2003), in *Kansas v. Colorado & Nebraska*, No. 126, Original, United States Supreme Court). After including a federal representative in negotiations, the three States agreed on the terms of the Republican River Compact on December 31, 1942. *Id.* at 9. Congress and the President approved the Compact in 1943.

The Republican River Compact (Compact) provides broad guidance to the States for managing the Republican River. While the Compact does include specific provisions, the Compact largely left "administrative details to be filled in as a part of the process of Compact administration." *Id.* at 11. The major purposes of the Compact are set forth in Article I, and include: maximizing efficiency of water use for multiple purposes; dividing the waters in an equitable manner; removing causes that may lead to controversies; promoting interstate comity; flood control; and recognizing that the most efficient use of Republican River water is beneficial consumptive use.

The concept of "virgin water supply" emerged as one of the most unique features of the Compact. Under Article II, the virgin water supply is defined as "the water supply within the Basin undepleted by the activities of man." The Compact uses this concept as a standard, from which the impacts of man may be distinguished. As later encounters highlighted, controversies between the States have arisen over how to determine the virgin water supply of the Basin. However, at the most basic level, a State's impacts on the Republican River are calculated by subtracting the State's beneficial consumptive use from its share of the total virgin water supply.

The Compact allocates water proportionately among the three States and determines compliance based on a State's consumptive use of its share of Republican River water. Based on an eleven-year average, the aggregate virgin water supply in the Basin was determined to be 478,900 acre-feet per year (AF). *Id.* at 12 (citing Compact, Art. III). This figure represents the sum of the individual sub-basin allocations throughout the Basin. Each State receives a portion of this average virgin water supply: 54,100 AF to Colorado (11%), 190,300 AF to Kansas (40%), and 234,500 AF to Nebraska (49%). *Id.*; Compact, Article IV. The Compact allocated the entire flow of the Republican River for beneficial consumptive use.

This method of apportioning water supplies in a river basin can be contrasted with that used in the Pecos River Compact between Texas and New Mexico. See *Texas v. New Mexico*, 485 U.S. 388 (1988). The Pecos River Compact is more akin to a pure delivery compact. In other words, New Mexico must satisfy a certain delivery requirement at the Texas-New Mexico border. By contrast, as the upstream State Nebraska has no delivery obligations to Kansas. This difference is significant for Nebraska, because it means that Nebraska does not need to deliver a specific quantity of water to Kansas each year. Instead, Nebraska must only live within its allocation to remain in compliance. In the context of the actual allocations, Nebraska cannot use more than 49% of the water supply in a given year. This notion would later be modified by the Final Settlement Stipulation between the three Republican River Compact States (see below), which introduced the concept of "averaging" to determine compliance over a period of two, three, or five years.

Construction of Federal Water Projects

Once Congress and the President approved the Compact, the federal government began an active period of reservoir construction within the Basin. The Pick-Sloan Plan grew out of the Flood Control Act

of 1944 (ch. 665, § 9, 58 Stat. 891). This Plan "authorized the Corps of Engineers and the Bureau of Reclamation to construct and operate a coordinated system of reservoirs for many purposes..." Second Report of Special Master McKusick, *supra* note 10, at 9. Reclamation then constructed seven reservoirs in the Basin over the next two decades: Bonny Reservoir in Colorado; Keith Sebelius Lake and Lovewell Reservoir in Kansas; and Enders Reservoir, Swanson Lake, Hugh Butler Lake, and Harry Strunk Lake in Nebraska.

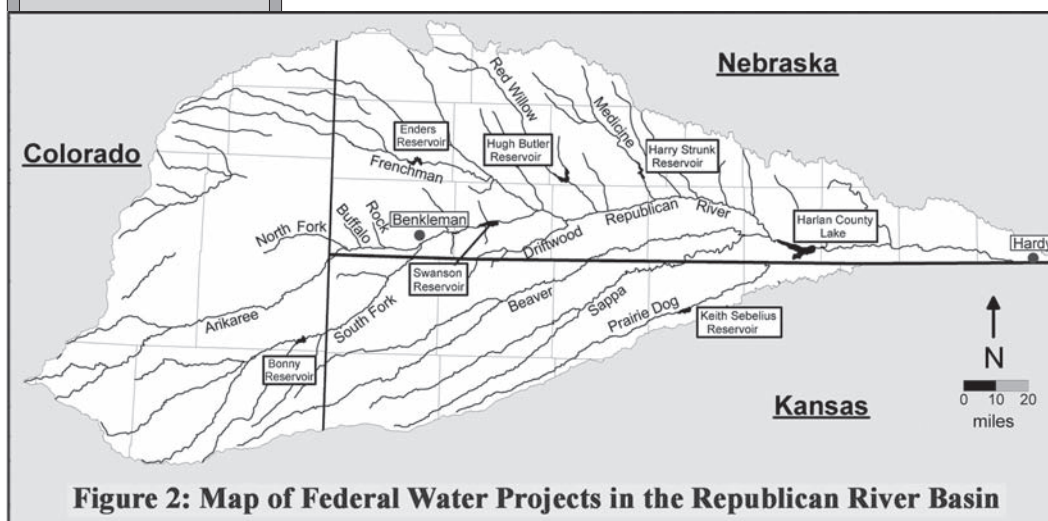


Figure 2: Map of Federal Water Projects in the Republican River Basin

Republican River Compact

Unanimous Action

Groundwater Accounting

States' Positions

Kansas Complaint

Groundwater Decision

2002 Settlement

Each Reclamation reservoir serves an associated irrigation district. The Corps also completed its two projects in the Basin during this period: Harlan County Reservoir in Nebraska and Milford Reservoir in Kansas (Note: Milford Reservoir was not included in the Final Settlement Stipulation in 2003 as “none of the activities involved in the settlement affect[] that reservoir directly.” *Id.* at 9, n.28). While Harlan County Reservoir is physically located in Nebraska, the reservoir is designed to serve irrigators in both Kansas and Nebraska. As a result, Harlan County Reservoir serves Bostwick Irrigation District, which is further divided into the state-specific operations of Kansas Bostwick Irrigation District (KBID) and Nebraska Bostwick Irrigation District (NBID).

COMPACT ADMINISTRATION

As noted above, the Compact left a significant amount of detail to be sorted out in the business of Compact administration. Article IX of the Compact enlists “the official in each State...charged with the duty of administering the public water supplies” to carry out this administrative function. Essentially, this places the onus of administering the Compact on the State Engineer/Director of the Colorado Division of Water Resources, the Chief Engineer/Director of the Kansas Division of Water Resources, and the Director of the Nebraska Department of Natural Resources. These officials comprise the Republican River Compact Administration (RRCA). They administer the Compact by the adoption of rules and regulations, “but they may do so only by unanimous action.” Second Report of Special Master McKusick, *supra* note 10, at 14.

Every year, RRCA generates retrospective calculations of the virgin water supply and the beneficial consumptive use within each State. After the numbers are compiled, RRCA determines whether a State stayed within its allocation of Republican River water for the previous year. Prior to including groundwater in the Compact accounting, RRCA debated whether and to what extent groundwater should be included in the formulas used to determine a State’s beneficial consumptive use. In the first formulas, RRCA included only groundwater pumping in the alluvial wells near the stream, and omitted non-alluvial groundwater wells that existed in the table lands further from the stream. See *Id.* at 16-17. This distinction, and the issue of the Compact’s treatment of groundwater in general, escalated into a larger conflict that could not be resolved by RRCA.

The States diverged on this point for many years. Kansas asserted that the Compact regulated all groundwater use. Nebraska countered that the Compact only regulated direct surface water diversions from the stream. Nebraska maintained that the Compact did not regulate groundwater pumping in the Basin because neither Kansas nor Nebraska had laws that authorized groundwater regulation at the time the Compact was entered. *Id.* at 18. Colorado took a hybrid position that mirrored the early RRCA position, where the Compact regulated alluvial pumping — but not non-alluvial groundwater use in the table lands. *Id.* This longstanding disagreement regarding the Compact’s treatment of groundwater led the States to the Supreme Court in the late 1990s.

KANSAS v. NEBRASKA & COLORADO

The Supreme Court granted Kansas’ Motion for Leave to File a Bill of Complaint on January 19, 1999. 525 U.S. 1101 (1999). Kansas claimed that Nebraska’s “proliferation and use of thousands of wells hydraulically connected to the Republican River and its tributaries” altered the original Compact allocations. Second Report of Special Master McKusick, *supra* note 10, at 19.

Nebraska was granted leave to file a motion to dismiss based on its assertion that the Compact did not regulate groundwater. 527 U.S. 1020 (1999). Special Master McKusick recommended that the Court deny Nebraska’s motion in his First Report and affirmatively find in favor of Kansas. First Report of Special Master McKusick, *supra* note 3, at 45. Specifically, the Special Master found that groundwater uses which deplete streamflow in the Basin should be included in Compact accounting. The Supreme Court followed this recommendation by an order dated June 29, 2000, and sent the case back to the Special Master for further proceedings. 530 U.S. 1272 (2000).

As the case moved forward, each State alleged that the others were violating the terms of the Compact. Second Report of Special Master McKusick, *supra* note 10, at 21. In light of the Special Master’s finding that groundwater depletions to stream flow should be accounted for and that Kansas could not alter the Compact accounting for years prior to bringing suit, the States were urged to consider a settlement. The States discussed settlement at case status conferences with the Special Master in late 2000. *Id.* at 22. In early 2002, the States notified the Special Master that they reached a settlement and requested a stay of the proceedings until December 15, 2002 to work out the details of the agreement. *Id.* at 23. During that time frame, the States and the United States discussed the following topics: compact accounting and computations; operation and supply for the primary storage and diversion facilities; timelines for enforcement and implementation of any consent decree; and development of an extensive groundwater model. *Id.*

On December 16, 2002, the parties filed the Final Settlement Stipulation (FSS) with the Special Master. On January 6, 2003, the Special Master held an informational hearing in Denver, Colorado, where the parties explained the FSS in detail and their understandings of how it would be implemented. *Id.* at 25. In his second report, the Special Master recommended approval of the FSS, and the Supreme Court obliged on May 19, 2003. *Id.* at 74; 538 U.S. 720.

Republican River Compact

Settlement Provisions

Consumptive Use

Averaging

Drought Administration

Groundwater Model

Consumptive Use - Defined

Arbitration Required

FINAL SETTLEMENT STIPULATION

The States adopted the FSS in the wake of the Supreme Court litigation.

THE FSS CONTAINED SEVERAL KEY PROVISIONS:

- Assignment of all groundwater use which depletes stream flow to a State's consumptive use
- Imported water supply credit for Nebraska's contribution to stream flow that occurs due to Platte River surface water projects
- Waiver that forever bars all past claims for damages
- Implementation schedule that allowed Nebraska time to begin the management of hydrologically connected water resources
- Compliance periods measured by two, three, or five year averages to increase a State's flexibility in the management of water resources during normal and dry year administration
- Requirement that the States engage in non-binding arbitration to attempt to resolve disputes prior to returning to the United States Supreme Court

Specifically, Appendix C to the FSS contained a host of formulas for calculating water use throughout the Basin. These formulas would be used to determine consumptive use for both surface and groundwater, canals, non-irrigation uses, and reservoir evaporation. In addition, Appendix C sets forth specific formulas for calculating consumptive use at the sub-basin levels.

Lacking clairvoyant powers to predict the weather for a given year, the States needed a method to respond after-the-fact to weather that had already occurred. For example, suppose a State experiences a drought in Year One. The State will neither know the extent of the drought for that year nor the corresponding stream flow depletions until Year One ends. In order to implement stricter regulations to account for dryer conditions, the States needed additional years to make up for the depletions in Year One. The averaging employed by the FSS allows a State to accomplish this after-the-fact regulation.

The period averaged depends on the weather conditions experienced. The trigger for this distinction hinges on the water supply for irrigation in Harlan County Reservoir. If the water supply available for irrigation in Harlan County Reservoir falls below 119,000 AF, water short year administration goes into effect (FSS, Article V, Section B and Appendix C, Section III.J). In water short years, Nebraska must meet a two-year compliance period. That means that Nebraska's average beneficial consumptive use cannot exceed its allocation on a two-year average. By contrast, if the water supply in Harlan County Reservoir is above 119,000 AF, normal year administration occurs. In normal years, Nebraska need only meet a five-year compliance period and its beneficial consumptive use is averaged over a longer time frame (FSS, Article IV, Section D and Appendix C, Section III.E).

To more accurately account for groundwater depletions impacting stream flow, the States contracted for the development of a detailed groundwater model. The Republican River groundwater model tracks groundwater depletions to stream flow in the river and its tributaries. Outputs from the model reflect these depletions. The outputs are then run through the Compact's Accounting Procedures to determine a State's beneficial consumptive use. As later disputes between the States highlighted, it is important to distinguish between the groundwater model and the Accounting Procedures. The groundwater model and the Accounting Procedures were developed separately during the settlement by different teams of experts from the States. The model tracks depletions to stream flow from groundwater, but the Accounting Procedures ultimately distill the model outputs and bring the information within the context of the RRCA.

In addition to surface water diversions and groundwater use, the FSS also accounts for evaporation from all federal reservoirs and all non-federal reservoirs of more than 15 AF which are located above Harlan County Lake (FSS, Article II and Appendix C, Section IV.A.2). The Compact defines beneficial consumptive use to include evaporation. Compact, *supra* note 2, Article II states that "[t]he term 'Beneficial Consumptive Use' is herein defined to be that use by which the water supply of the Basin is consumed through the activities of man, and shall include water consumed by evaporation from any reservoir, canal, ditch, or irrigated area." Generally, the State in which the evaporation occurs includes such evaporation as part of its beneficial consumptive use. The lone exception to this rule is Harlan County Reservoir, where the States agreed that evaporation would be split based on who uses water from the reservoir. When no one uses Harlan County Reservoir water, the split is based on the average use of the preceding three years (FSS, Appendix C, Section IV.A.2.e.1).

Finally, the FSS established an administrative remedy that the States must exhaust before requesting relief from the Supreme Court (Article VII.B.8). This requirement has since set the stage for three arbitration proceedings, one recently completed and two additional arbitrations now underway. Beyond requiring non-binding arbitration and imposing a few broad time constraints, the FSS left much of the arbitration process to be fashioned from scratch by the States.

CREATING AN ARBITRATION PROCESS FROM SCRATCH

At the outset, the FSS provides the States with discretion to decide how quickly to resolve an issue within RRCA. The FSS allows for "fast track" dispute resolution and establishes aggressive timelines to resolve the designated issues. FSS, Article VII, Sections A & C. If the States are unable to reach agreement with regard to a disputed issue, the FSS says that "any dispute" which has been properly submitted to

Republican River Compact

Arbitration Guidelines

Legal Issues Bifurcated

Kansas' Changes

Nebraska Compliance Issues

RRCA and addressed by RRCA “shall be submitted to non-binding arbitration unless otherwise agreed to by all States with an Actual Interest.” FSS, Article VII.A.7. The FSS also sets forth deadlines for selecting an arbitrator and reaching a decision, as well as broad requirements for the arbitrator’s decision (e.g. a determination on the merits and a proposed remedy). *See, generally, id.* at Article VII. Outside of these broad guidelines, the FSS provides sparse guidance on how to conduct the arbitration process.

In developing the first arbitration process, the States set out to find an arbitrator with legal, hydrological, and engineering expertise. The candidate pool consisted of engineers and attorneys, with few candidates qualified in both fields. The States eventually decided to select engineer and former Director of the Idaho Department of Water Resources, Karl Dreher.

Once an arbitrator was selected, the States still needed to craft a framework of guidelines to provide structure for the arbitration process. Borrowing from a host of model dispute resolution guidelines, the States developed an arbitration agreement that incorporated rules for conflicts of interest, ex parte communications, limited discovery, filing and service requirements, confidentiality, and retaining the record. The States agreed to generally honor the rules of evidence, but in line with the arbitration as a whole, the rules were non-binding.

The States agreed to bifurcate the first round of arbitration to address several legal issues. By allowing the arbitrator to decide several legal issues at a preliminary stage, the States were able to narrow the focus of discovery and the issues for the trial. The trial itself required significant efforts from the States and others involved to develop an orderly process for presenting testimony and evidence, to agree and keep track of time allocations for specific issues, and to address the myriad of procedural issues which arose as the trial moved forward. Working under aggressive timelines, the States generated an arbitration process from scratch to adequately address the complex issues. The States can now use this experience as they continue to work together to improve the process for resolving disputed issues.

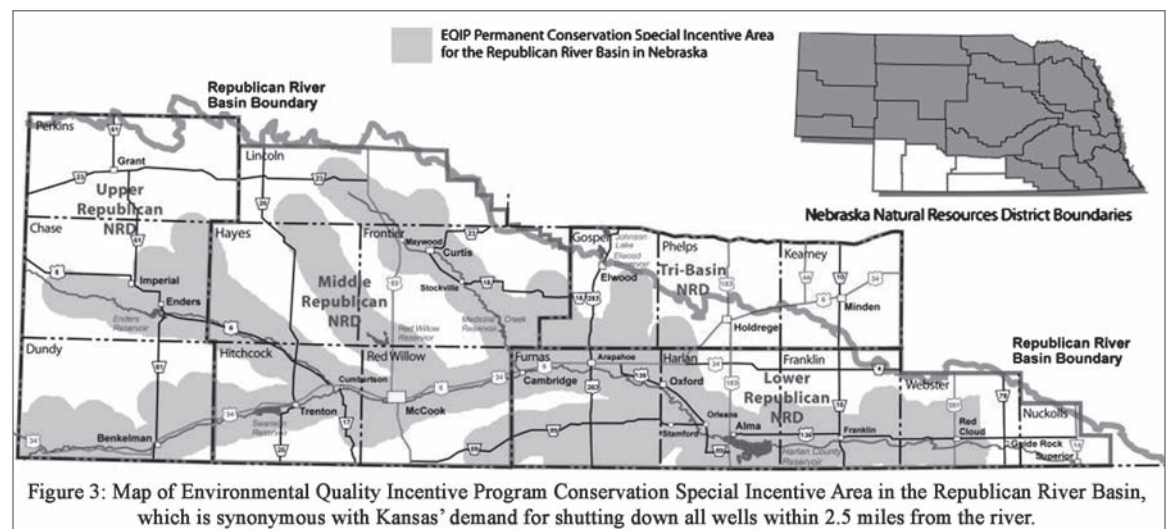
FIRST ROUND OF NON-BINDING ARBITRATION

Issues Raised in the First Non-Binding Arbitration

The first round of arbitration proceedings involved a mixture of issues brought by Kansas and Nebraska. Kansas raised two issues related to allegations that Nebraska did not comply with the terms of the FSS during water short year 2006. Nebraska raised an issue of its own, seeking to address several errors present in the FSS’s Accounting Procedures.

In 2007, Kansas began to express concerns to RRCA that Nebraska was not meeting its obligations under the settlement. On December 19, 2007, Kansas’ Chief Engineer David Barfield sent correspondence to Nebraska’s Director of the Department of Natural Resources, Ann Bleed, claiming that Nebraska overused its share of Republican River water during the 2006 water short year, measured by the average water use of 2005 and 2006. Kansas requested monetary payment based on the greater of two measures — either the gains realized by Nebraska as a result of its alleged non-compliance or Kansas’ damages. Kansas ultimately determined that Nebraska’s gains were greater and requested payment of \$72,000,000. See *TWR* #49, Water Briefs.

Kansas raised another issue in its December 19, 2007 letter, which involved imposing a compliance remedy on Nebraska. In pertinent part, the remedy included: 1) shutting down all groundwater wells and irrigation in Nebraska within two miles of the Republican River and its tributaries; 2) shutting down Nebraska groundwater irrigation on acreage added after the year 2000 within the Basin; and 3) further reductions in consumptive use in the Basin to maintain yearly compliance or the hydrological equivalent of this remedy. Kansas also suggested that appointment of a river master might be necessary to assist Nebraska in controlling its water users.



Republican River Compact

Nebraska's Concerns

Legal Issues Decision

Remaining Issues

Kansas Losses

Nebraska Compliance

Meanwhile, also in 2007, Nebraska expressed concern with the final accounting figures for 2006 and worked within RRCA to address errors in the Accounting Procedures. Nebraska maintained that these errors produced results that did not accurately reflect the hydrologic conditions of the Basin. The first of these errors arose in certain stream-drying conditions and signaled that the groundwater model may be producing increasingly non-linear results over time. Nebraska did not challenge the non-linearity of the groundwater model, but instead challenged the manner in which these non-linear results are addressed by the Accounting Procedures. A second error involved moving several groundwater model accounting points to match the accounting points for the surface water system. A third error related to the accounting for spillback and return flows from the Pioneer Ditch, referred to in Nebraska as the Haigler Canal.

All three issues and a host of sub-issues were ultimately submitted to arbitrator Karl Dreher on October 23, 2008, for fast-track resolution (procedures for fast-track dispute resolution are set forth in the FSS, Article VII, Section C). The States agreed to bifurcate the proceeding and directed the arbitrator to issue a preliminary ruling on certain legal issues — this ruling would thereby narrow the scope of issues to be tried at the final hearing.

Final Decision on Legal Issues

IN HIS "FINAL DECISION ON LEGAL ISSUES" THE ARBITRATOR FOUND THAT:

- Nebraska's proposed accounting changes were proper subjects for dispute resolution (Arbitrator's Final Decision on Legal Issues, 3 (January 22, 2009))
- Evaporation from non-federal reservoirs located below Harlan County Reservoir must be accounted for by the States (*Id.* at 8)
- When only one of the two States uses water from Harlan County Reservoir, evaporation must be split in accordance with actual water use from the lake (*Id.* at 10). Despite holding that Kansas must account for 100% of the evaporative losses on Harlan County Reservoir when only Kansas uses the water, the arbitrator did suggest that this provision be changed by RRCA for instances when Nebraska sought to offset groundwater consumptive use through surface water purchases.
- Losses suffered by Kansas rather than Nebraska's gains are the proper measure of damages (*Id.* at 13)
- Arbitrator can suggest a remedy for Nebraska to maintain Compact compliance if necessary (*Id.* at 17)
- Kansas would be entitled to damages for both 2005 and 2006, rather than just 2006 (*Id.* at 19). The arbitrator recognized that under two or five year averaging, any damage payment would only encompass a single year based on the two or five year average for that year. However, even though 2006 was a water short year using a two-year average (2005 + 2006/2), the arbitrator felt that Kansas had not waived a claim for damages in 2005.
- Crediting for damages resulting from previous violations can only be considered to the extent necessary to calculate a proposed remedy for future compliance (*Id.* at 21)

Final Hearing – Remaining Issues

This ruling left three primary issues on the table for the final hearing. The first issue was damages Kansas suffered from Nebraska's overuse of water in 2005 and 2006. The second issue was whether a remedy should be imposed on Nebraska to maintain Compact compliance into the future. The third issue was whether Nebraska's proposed accounting changes should be adopted.

The States participated in a two-week arbitration hearing in Denver, Colorado from March 9-19, 2009. The hearing dedicated equal time to each of the three issues referenced above. In addition, because Reclamation responded to a *Touhy* request by the State of Kansas the week before the hearing and made two witnesses available, the States agreed to include an additional hearing date on April 14, 2009 to accommodate testimony from Reclamation. (A *Touhy* Request is a form of public records request which seeks document production or testimony related to litigation in which the United States is not a party and arises from *United States ex rel. Touhy v. Ragen*, 340 U.S. 462, 71 S. Ct. 416 (1951).)

On the first issue, the arbitrator's preliminary ruling required Kansas to calculate its actual losses, rather than Nebraska's gains (Arbitrator's Final Decision on Legal Issues, *supra* note 45, at 13-17). Kansas thereafter reported a damage total for 2005 and 2006 of over \$9,000,000 based on direct and indirect economic losses. Kansas and Nebraska presented expert engineering testimony regarding how much water Kansas could have used had Nebraska not overused any water in those years. Determining on this figure became an important first step before establishing any economic loss. As a result, the States bifurcated the damages issue into an analysis of how much additional water Kansas could have used, and based on that figure, how much economic loss Kansas suffered. After both States presented testimony on how much water Kansas could have used, all three States presented economic experts to ascertain the value of the water. Kansas maintained that its \$9,000,000 figure was the proper measure, while Nebraska and Colorado presented a range of damages from nearly zero to about \$2,000,000.

The second issue involved the administrative and hydrological adequacy of Nebraska's efforts to maintain Compact compliance. In light of the arbitrator's preliminary ruling that a remedy could be imposed if found necessary, extensive expert testimony centered on Nebraska's Integrated Management Plans (IMPs), which were adopted through the joint efforts of Nebraska's Department of Natural Resources and Natural Resources Districts in the Basin to manage hydrologically connected groundwater.

Republican River Compact

Accounting Procedures

The third issue, related to changes in the Accounting Procedures, also involved a complex battle of expert testimony. Testimony focused on the nature of the errors produced by the current Accounting Procedures during stream-drying conditions and Nebraska's proposed changes to address these errors, as well as the understandings of the original committee members who developed the groundwater model and the Accounting Procedures. The second accounting error involved a relatively straightforward approach to interpreting the Compact and FSS on the location of groundwater model accounting points. The third accounting error elicited engineering testimony on the geography of the Haigler Canal and the movement of water from Colorado into Nebraska. Nebraska ultimately stood by all of its proposed accounting changes, while Kansas and Colorado maintained that such changes were not proper.

The Arbitrator's Findings & Recommendations

The arbitrator issued a final decision on June 30, 2009. The decision contained a background of the interstate dispute leading up to the arbitration and included 159 findings, 53 conclusions, and 12 recommendations to the States. Arbitrator's Final Decision (June 30, 2009).

Kansas' Damages

The arbitrator recommended an award of \$10,000 in nominal damages to be paid by Nebraska to Kansas for overuse of water in 2005 and 2006. *Id.* at 71-72. The arbitrator questioned the reliability of Kansas' methodology for illustrating how much water would be delivered to the headgates of Kansas farmers and for quantifying its damages. *Id.* at 65-67. Ultimately, the arbitrator found that Kansas failed to carry its burden of proof to quantify its actual damages, but stated that Kansas had certainly suffered damages which may amount to one or several million dollars. *Id.* at 67. The arbitrator recommended a nominal damage award until such time as Kansas adequately proved its damage claim. *Id.* at 67, 71-72.

Nebraska Proposals

The arbitrator rejected Kansas' proposed compliance remedy, finding that Kansas's proposed remedy overestimated the measures Nebraska needs to take in order to be in compliance with the Compact. *Id.* at 68. While the arbitrator noted that Kansas may not dictate the manner in which Nebraska chooses to comply with the Compact, the arbitrator reinforced the fact that Nebraska must comply. *Id.* at 69. Despite rejecting Kansas' remedy, the arbitrator found that Nebraska's IMPs did not go far enough to reduce consumptive use in periods of extended drought. *Id.* at 68-69, 72. While Nebraska acknowledged this shortfall during extended drought through its testimony and briefing, the arbitrator recommended that Nebraska obtain permanent, interruptible water supply contracts to purchase surface water from irrigation districts and to further reduce its consumptive groundwater use in the Basin. *Id.* at 72. The arbitrator also recommended that Nebraska be enjoined from violating the terms of the Compact and FSS in the future, and that sanctions may be appropriate based on the specific circumstances of Nebraska's failure to comply. *Id.* Finally, the arbitrator found that a river master need not be appointed at this time. *Id.*

Virgin Water Supply Accounting

The arbitrator provided a complex mixture of recommendations concerning Accounting Procedures. As to the first Accounting Procedures issue, the arbitrator acknowledged that a problem exists with the current methodology and found that Nebraska's methodology for determining the Virgin Water Supply was more consistent with the Compact than the current procedures. *Id.* at 61. Instead of suggesting the States adopt Nebraska's proposal, the arbitrator recommended reconvening the technical modeling committee to review the non-linearity of the model in certain stream-drying conditions and to recommend a solution to RRCA regarding the issue. *Id.* at 61, 71. Second, the arbitrator did not recommend adopting Nebraska's proposed changes for determining the amount of water diverted from the North Fork Republican River to the Haigler Canal, apportioning return flows from irrigation between the Main Stem and the Arikaree River, and calculating the virgin water supply for the North Fork Republican River and the Arikaree River. *Id.* at 71. Third, the arbitrator recommended adopting Nebraska's proposed changes to the location of certain "accounting points" where doing so would avoid a double-accounting of water. *Id.*

Future Actions

POTENTIAL PATHWAYS FOR FUTURE RESOLUTION

Under the terms of the FSS, each State had 30 days to notify the other States of whether the State would accept or reject the arbitrator's final decision (Article VII.B.6). On July 30, 2009, the States issued letters to each other which set forth each State's points of acceptance or rejection to the arbitrator's final decision. Going forward, the States may continue to work within RRCA to determine whether a resolution can be reached on the issues decided by the arbitrator. If a State does not accept the decision, and having exhausted its administrative remedies under the FSS, that State may file a petition for an original action to the Supreme Court for further relief.

Second Round

SECOND ROUND OF NON-BINDING ARBITRATION

As the States progressed through the first round of arbitration, the States were also busy on another front — working within RRCA to resolve additional disputes that had arisen alongside and within the current dispute. Just weeks after the smoke cleared from the parting shots of the first arbitration, two new disputes ripened within RRCA. After being addressed by RRCA at its 2009 Annual Meeting, Colorado and Nebraska elected to advance these disputes into non-binding arbitration.

Nebraska's Crediting Issue

Nebraska's "crediting issue" arose during the first round of arbitration. As stated previously, a State's compliance with the Compact is determined by averaging a State's consumptive use over a period of several years. The period may vary from two to five years, depending on the water supply within the Basin.

Credit Periods

Republican River Compact

Credit for Damages Paid

During the initial arbitration, Nebraska requested the arbitrator to determine whether or not Nebraska was entitled to receive credit in the Compact accounting if Nebraska ultimately paid a damage award to make Kansas whole for the 2006 water short year. In other words, if Nebraska compensated Kansas for its damages sustained in 2006, would Nebraska be entitled to a credit in the Compact accounting such that future averaging scenarios would reflect the fact that Kansas had been made whole for any Compact violations in 2006?

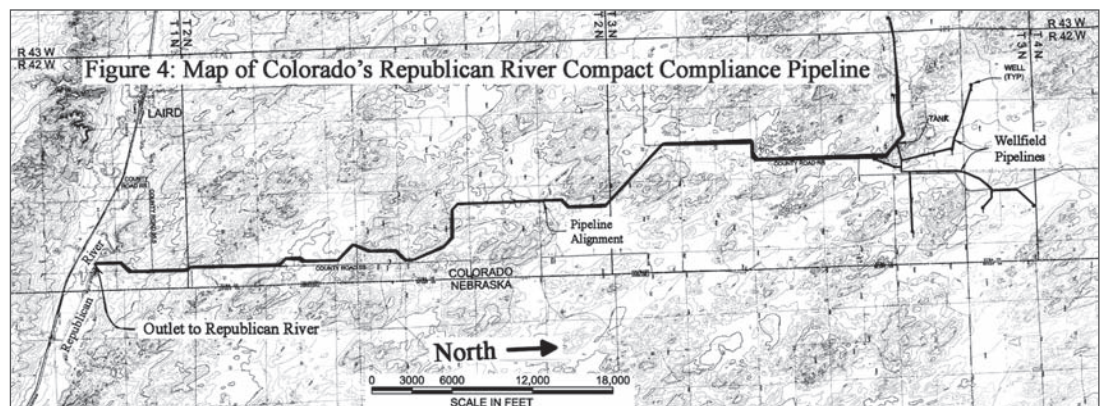
In his decision on the legal issues, the arbitrator found that Nebraska had not properly brought the crediting issue before RRCA and therefore could not arbitrate the issue. Arbitrator's Final Decision on Legal Issues, *supra* note 45, at 21-24. The arbitrator did note, however, that to the extent crediting needed to be considered in conjunction with Kansas's proposed remedy, the issue was subject to arbitration. *Id.* at 24. Throughout the initial arbitration proceeding, Nebraska maintained that the crediting issue was properly before the arbitrator as a necessary corollary to Kansas' proposed remedy. While the decision on legal issues indicated that crediting would not be considered if Kansas' proposed remedy was not adopted, the arbitrator found in the final decision that Nebraska should not receive credit in the Compact accounting. Arbitrator's Final Decision, *supra* note 54, at 70-72. In the end, the arbitrator's decision to deny Nebraska's credit for any damages paid was not based on the merits of the issue, but instead summarily rejected as a sanction for violating the Compact in the first water short year under the FSS. *Id.* at 70, 72.

As a result of the arbitrator's legal decision and to ensure that no procedural defects existed, Nebraska submitted the crediting issue to RRCA for discussion and resolution on June 15, 2009. Nebraska's letter to RRCA explained "that when a State is found to be in violation of the Compact and pays damages based on that violation, that State should receive a credit in the Compact accounting to reflect the payment made." (June 15, 2006 Letter from Commissioner Brian Dunnigan of Nebraska to Commissioners Dick Wolfe of Colorado and David Barfield of Kansas). Nebraska's letter further stated that "the Compact accounting should be adjusted by reducing the annual beneficial consumptive use calculation for the year in which payment is made by that amount of water of which the downstream state was deprived according to the official RRCA accounting spreadsheets." *Id.* While examples which demonstrate the concept within the context of the Compact accounting may appear complex, the concept itself is based on the simple premise of avoiding a double recovery. Nebraska maintained that not providing this credit results in a double recovery by Kansas, since Kansas could potentially receive a damage payment making it whole for violations in 2006 — as well as continuing to leave the 2006 violation in the official accounting to be considered in future averages (e.g. the 2006-2007 two year average and the 2003-2007 five year average).

Nebraska reinforced its intention to pursue the crediting issue in a letter to the RRCA Commissioners on July 29, 2009. The States discussed the crediting issue during the Engineering Committee working session at the RRCA Annual Meeting on August 11, 2009. On August 12, 2009, Nebraska requested that RRCA resolve the crediting issue and adopt Nebraska's proposed resolution. Colorado and Kansas both voted against adopting Nebraska's resolution. Having been addressed by the RRCA, Nebraska invoked non-binding arbitration on August 28, 2009.

Colorado's Compact Compliance Pipeline

After falling behind in Compact accounting for several years, Colorado set to work on an augmentation pipeline to offset depletions to the Republican River. Colorado's augmentation pipeline feeds from a well-field located within the Republican River Basin. It has been reported that the costs of construction for the pipeline will exceed \$70 million (See Republican River Water Conservation District website: www.republicanriver.com/Pipeline/tabid/101/Default.aspx). The pipeline wells are located eight to 15 miles north of the North Fork of the Republican River and will empty into the North Fork at the Colorado/Nebraska State line. Instead of importing water from outside the Republican River Basin, Colorado's pipeline proposal intends to construct the well-field within the Basin. To accomplish this task, Colorado has requested to transfer water rights from 62 existing well permits so that the pipeline can draw approximately 15,000 AF of water from only 15 wells. *Id.*



Retroactive Credit

Double Recovery?

Augmentation Pipeline

Groundwater Offset

Republican River Compact

Augmentation Impacts

2010 Decision Anticipated

During RRCA's review of Colorado's proposal, Kansas and Nebraska raised several issues related to the ultimate effect of the augmentation deliveries in the Compact accounting. Kansas expressed concerns regarding depletions to the South Fork of the Republican River. The North Fork and South Fork of the Republican River rise in Colorado, but flow into Nebraska and Kansas, respectively. Therefore, Kansas felt that depletions to the South Fork should not be accounted for entirely by delivering augmentation water to the North Fork — which would flow directly into Nebraska. Nebraska also expressed concerns about Colorado's augmentation pipeline, primarily centering on the proposal's failure to protect Nebraska surface water users on the North Fork and placing effective limits on water volumes pumped into the North Fork Republican River.

The States worked extensively within RRCA from April 2008 through August 2009 to come to an agreement on Colorado's augmentation pipeline proposal. Colorado designated the Compact compliance pipeline proposal as a fast-track issue and requested a resolution on its proposal at a special meeting of RRCA on April 28, 2009. However, as the original concerns of Kansas and Nebraska were not resolved, the States voted against Colorado's proposed resolution at that time. Colorado agreed to continue to work with the States on a settlement before invoking non-binding arbitration. However, the States could not reach a settlement that adequately addressed the original concerns of Kansas and Nebraska. The States again voted against Colorado's proposed resolution at the 2009 RRCA Annual Meeting on August 12, 2009.

The States continue to move forward with the second round of arbitration proceedings. Pursuant to the timelines set forth by Colorado and Nebraska, the States discussed potential candidates for a new arbitrator, whether the same arbitrator could be used for both proceedings, and established deadlines to begin the arbitration process in the fall of 2009. The States anticipate a final decision on both Nebraska's crediting issue and Colorado's augmentation pipeline in 2010.

CONCLUSION

As with the first arbitration, each State will have 30 days to notify the other States whether the State will accept or reject the arbitrator's final decision. The States must then decide whether to work within RRCA to resolve any lingering disputes, or to seek relief from the Supreme Court. Depending on the status of the first arbitration, it remains within the range of possibilities that all issues addressed in the three arbitration proceedings may ultimately be combined into one original action before the United States Supreme Court.

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AZ Water Management

Arizona Tradition

Emerging Issues

Groundwater Dependence

"Safe-Yield"

"Planned Depletion"

ARIZONA WATER MANAGEMENT ISSUES

MAINTAINING SUSTAINABLE WATER MANAGEMENT

by Steve Olson, Executive Director,
Arizona Municipal Water Users Association (Phoenix, AZ)

Introduction

The Phoenix Metropolitan Area has grown and prospered due to an understanding that we live in a desert where water is and always will be a precious commodity. Arizonans have had to carefully plan and manage the supplies available to us to guarantee that adequate water supplies will meet the increasing demands of one of the fastest growing economies and populations in the United States.

Arizona has been at the forefront in innovative ways to manage its most precious resource, water. As far back as 1903, when the Salt River Valley Water Users' Association was created, Arizona was taking significant steps to address the vital need to manage water in a desert climate. In more recent years, the passage of Arizona's Groundwater Management Act in 1980, the completion of the Central Arizona Project (CAP) in the 1990s, and the creation of the Arizona Water Bank in 1996 have continued Arizona's tradition of making the commitment today to ensure water for Arizona's future.

TWO YEARS AFTER THE PASSAGE OF THE 1980 GROUNDWATER MANAGEMENT ACT, BRUCE BABBITT STATED:

Water is Arizona's most important resource — the key to our future growth and prosperity.

While we have made great strides towards resolving them, water issues will continue to be among our most difficult public policy questions during the remainder of the decade and beyond. In approaching these issues, we must not only look toward the future, but also be guided by the experiences of the past. The progress Arizona has made toward effective management of its water future carries important lessons for the hard decisions which must be made in the next decade. (Bruce Babbitt, *Facing our Water Future*, Arizona Waterline Edited by Athia L. Hardt, p.3)

While these words were written in 1982, they remain true today. Arizona's decision-makers must continue to make the hard decisions that will ensure that sustainable water supplies are available for the future.

SIGNIFICANT, EMERGING ISSUES, INCLUDE:

- Reducing the use of groundwater in excess of "safe-yield"
- Securing new water supplies as full utilization of CAP approaches
- Stabilizing groundwater levels to eliminate overdraft or water logging in localized areas of the Active Management Areas
- Planning for water supply shortages on the Colorado River and in our surface water systems, as well as anticipating potential impacts from global climate change
- Continuing innovative conservation efforts and effluent reuse

The Groundwater Management Act Today

With the passage of the Groundwater Management Act (GMA or Act) in 1980, Arizona's leaders took a visionary step toward ensuring sustainable water supplies in urban and urbanizing areas of the state. The passage of GMA reflected Arizona's resolve to reduce its heavy dependence on groundwater supplies and move to renewable water sources to meet its future needs. In areas of the state where groundwater overdrafting was considered to be most severe, GMA established Active Management Areas (AMAs). The Phoenix, Pinal, Tucson and Prescott AMAs were established in 1980. Subsequently, the Santa Cruz AMA was carved out of the Tucson AMA. For each AMA, the Act sets management goals.

In the Phoenix, Tucson and Prescott AMAs (see map, next page) the long-term groundwater management goal is "safe-yield." Safe-yield is defined as a "goal which attempts to achieve and thereafter maintain a long-term balance between the annual amount of natural and artificial recharge in the AMA." (Arizona Revised Statutes (A.R.S.) §45-561). In the Pinal AMA, the management goal has commonly been described as "planned depletion," and in the Santa Cruz AMA, the management goal is to maintain a safe-yield condition and prevent water tables from experiencing long-term declines. The goals established by GMA focused on what would today be called "sustainability" or "meeting the needs of present generations, while not compromising the ability of future generations to meet their own needs," to quote from the 1987 United Nations Report, *Our Common Future*, which was a groundbreaking attempt to define "sustainability."

To achieve the management goals of each AMA, the Act requires the Arizona Department of Water Resources (ADWR) to set mandatory water conservation requirements for municipal, industrial and agricultural water users. These requirements are to become increasingly stringent over time. To allow

AZ Water Management

Conservation Plans

Future Supply

"Residual Overdraft"

for the evolution of conservation requirements and accommodate unforeseen circumstances, ADWR must adopt a separate management plan for each AMA for each of the following management periods:

First Management Period:	1980-1990
Second Management Period:	1990-2000
Third Management Period:	2000-2010
Fourth Management Period:	2010-2020
Fifth Management Period:	2020-2025

In addition, the Act specifies that the management plans must include provisions for augmentation of water supplies and an assessment of water quality.

Safe-Yield Goal

The safe-yield goal seemed distant in 1980, yet it provided the groundwater management target that was needed in drafting GMA. The safe-yield goal met the management policy objective to protect the economy of the AMAs by ensuring that groundwater supplies were preserved for future uses at levels that would reduce subsidence and water quality degradation ("subsidence" means the settling or lowering of the surface of land which results from the withdrawal of groundwater). This goal meant that development of future water supplies could not rely on cheap unlimited access to groundwater. When safe-yield is achieved, the AMAs will be living within the limits of renewable supplies and will be able to rely on stored groundwater during future droughts. By setting this goal, the focus of future water use was shifted to renewable supplies and replacing groundwater use through recharge and replenishment.

Despite continued population growth and economic development, a substantial reduction in groundwater pumping has been accomplished since 1980. However, although water users in Arizona's AMAs have increased their use of renewable water supplies and implemented innovative conservation programs, ADWR's water use projections indicate that overdraft will continue past 2025 (ADWR 2007 Annual Report). This continued overdraft is due to what has been termed "residual overdraft" — entitlements to groundwater pumping pursuant to rights granted and permits already authorized by GMA.

A major component of residual overdraft is groundwater use attributable to grandfathered rights, which are groundwater withdrawal rights based on historic pumping that occurred from 1975 through 1979. These rights, which establish a quantified right to groundwater use that does not have a built-in expiration date, may exist far into the future.

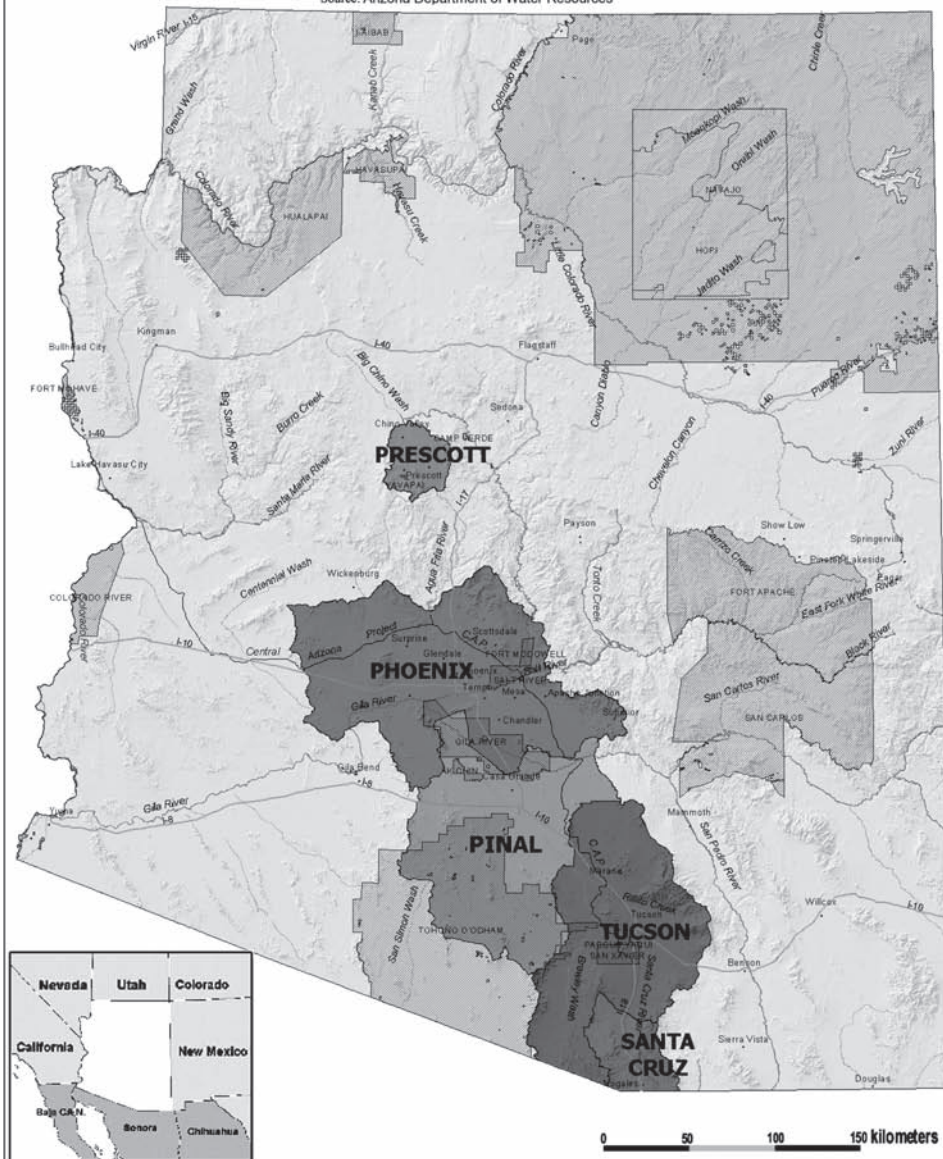
TYPES OF GRANDFATHERED RIGHTS INCLUDE:

- Irrigation Grandfathered Rights (IGFRs)
- Type 1 Non-Irrigation Grandfathered Rights (Type 1s)
- Type 2 Non-Irrigation Grandfathered Rights (Type 2s)

When GMA was first conceived, agricultural use was expected to decline over time due to the Act's prohibition on bringing new agricultural acres into production, incentives to purchase and retire grandfathered rights, and imposition of conservation requirements in the management plans. Through these limits on *future* agricultural groundwater use, agricultural residual overdraft was expected to disappear as

Active Management Areas

Source: Arizona Department of Water Resources



AZ Water Management

Conversion of Rights

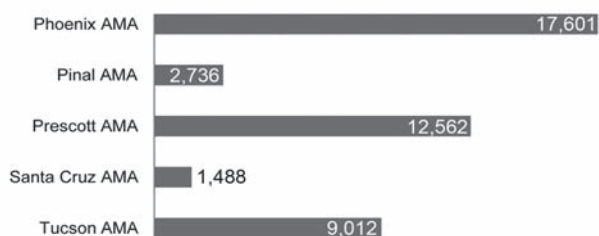
the AMAs approached their 2025 management goals. While there has been a gradual decline of agriculture in the region, at current rates projections indicate that there will be some component of agricultural use that will rely on groundwater as its source of supply well past 2025. Additionally, when land is retired from irrigation, it is possible to convert the IGFR to a Type 1 Right, thereby authorizing groundwater withdrawals of up to three acre-feet per acre of retired farm land.

Continued access to groundwater for non-agricultural uses existing prior to 1980 is also recognized by the GMA in the form of Type 2 Rights. A Type 2 Right may be used anywhere within the AMA in which the historical use took place and may be sold without selling the land on which the right was historically used. With limited exceptions, Type 2 Rights may be used for any non-irrigation (i.e., non-agricultural irrigation) use.

In addition to Grandfathered Rights, the GMA allows ADWR to issue permits for new uses of groundwater in accordance with specified criteria. These permits include: 1) exempt well permits for small domestic wells; 2) mineral extraction permits that are issued for mining activities, including sand and gravel facilities; and 3) General Industrial Use permits that allow industrial use for a specified period up to 50 years when other sources of supply are not available.

Exempt Wells

ARIZONA ACTIVE MANAGEMENT AREAS (AMAs)
REGISTERED EXEMPT WELLS



Data: 2009 Arizona Department of Water Resources (ADWR). ADWR's Well Registry database contains well information provided by well owners and drillers when wells are registered with the State of Arizona. Data is not independently verified by ADWR.

In some areas of the AMAs, exempt wells generate a significant groundwater demand. An exempt well is defined as a well having a pump with a maximum capacity of not more than 35 gallons of water per minute (gpm). See A.R.S. §45-402. At 35 gpm, pumping an exempt well 24 hours per day, seven days a week, translates into approximately 56 acre-feet per year. Even if the exempt well only runs three hours per day, that "domestic use" translates into seven acre-feet per year. With approximately 43,400 exempt wells in the AMAs, the impact of exempt well pumpage is significant.

In the Phoenix AMA, a greater impediment to achieving safe-yield is the increasing industrial groundwater demand resulting from the ease in obtaining new withdrawal permits and the increasing use of Type 2 Rights that have been dormant.

Replenishment Rates

In 2001, the Governor's *Water Management Commission Final Report* projected that in 2025 groundwater use in the Phoenix AMA will be in the range of 662,236 to 1,046,717 acre-feet. This is significantly higher than current groundwater replenishment rates. During the Fourth and Fifth Management Periods (2010-2020 and 2020-2025 respectively), water users in the AMAs must address closing the gap between overdraft and safe-yield.

Assured Water Supply

One way that GMA requires reductions in overdraft resulting from municipal groundwater use is through the Assured Water Supply (AWS) requirements. To meet the AWS requirements, a water provider or developer of a proposed subdivision must demonstrate that sufficient water of adequate quality will be physically, legally and continuously available to satisfy the needs of the proposed use for at least 100 years. A.R.S. §45-576. In addition, the water use must be consistent with the management plan and achievement of the management goal for the AMA. ADWR's rules to implement the AWS provisions have the effect of requiring municipal water providers that must obtain an AWS to use renewable water supplies to meet future demands. Municipal providers have two ways to meet the consistency with the management goal requirement: 1) through use of renewable supplies such as CAP water, Salt River Project surface water, and effluent; or 2) by enrolling in the Central Arizona Groundwater Replenishment District (CAGRD). CAGRD was created to replenish the groundwater that is pumped by its members.

Many municipal water providers in the AMAs, including all of the Arizona Municipal Water Users Association (AMWUA) members — Avondale, Chandler, Gilbert, Glendale, Goodyear, Mesa, Peoria, Phoenix, Scottsdale and Tempe — are designated as having an AWS. In order to secure an AWS designation, municipal water providers have made substantial financial commitments to invest in projects and programs to make use of CAP water and other renewable supplies. Through use of these renewable supplies, many municipal providers have reduced their use of groundwater to a level where they are no longer using more groundwater than is being returned to the aquifers. In essence, these municipal providers have achieved "safe-yield" on a local level to comply with the AWS requirements.

In 1993, the legislature authorized the Central Arizona Water Conservation District (CAWCD), which operates CAP, to assist developers and water providers *without* access to renewable supplies to demonstrate an assured water supply. This function of the CAWCD is commonly referred to as the Central Arizona Groundwater Replenishment District (CAGRD). Developments and water providers that enroll in CAGRD are allowed to pump more groundwater to serve new unsubdivided lots than would otherwise be allowed under the assured water supply rules (so called "excess groundwater") as long as the excess groundwater is physically available. CAGRD must replace the excess groundwater that is pumped to serve CAGRD

100-Year Supply

Municipal Providers

"Excess Groundwater"

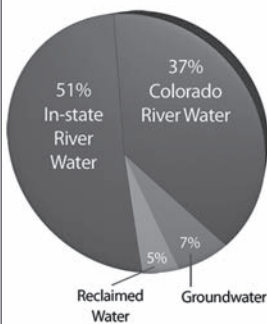
AZ Water Management

Localized Declines

Impacts

Phoenix Sources

AMWUA MEMBER WATER USE



Source: Based on reports compiled by the Arizona Municipal Water Users Association, 2007

Management Assumptions

Recharge & Recovery

members by replenishing (recharging) an equal amount of water. While replenishment must occur within the same AMA, CAGRDR is not required to replenish in the area from which the excess groundwater is withdrawn.

Although the safe-yield goal has resulted in an AMA-wide reduction in groundwater use, it does not adequately address localized areas of continued groundwater decline. These localized declines have resulted from a number of factors including: continued use of groundwater pursuant to rights and permits; the cumulative groundwater pumping that results from multiple wells in close proximity to each other; and recovery of water from areas outside the hydrologic impact of recharge and replenishment projects. The rapid growth of CAGRDR replenishment obligations and the expansion of the use of recharge as a means to store water to comply with AWS requirements have raised concerns regarding the local reliability of groundwater supplies in areas where local groundwater declines are occurring. Moreover, continued pumping in areas of declining groundwater levels results in land subsidence, diminished water quality and, ultimately, a lack of a viable water supply to serve existing customers. Balancing localized water levels while preserving the economic commitments made by existing water users must be addressed as Arizona continues to grow.

Planning for the Next Bucket

The primary sources of water in the Phoenix Metropolitan Area are: 1) intrastate surface water supplies largely provided through the Salt River Project; 2) Colorado River Water provided through CAP; 3) groundwater pumped from aquifers in the region; and 4) reclaimed water treated to very high quality standards at water reclamation facilities. The development of these multiple sources provides the area with a more dependable supply than is provided in many other parts of the country. However, the time is rapidly approaching when these sources will be fully utilized.

Arizona's water interests have begun to work together to identify and develop new water supplies to meet the needs of future development, while maintaining the commitment to achieve groundwater management goals. Arizona's water planners have initiated discussions to plan for the "next bucket" through a process sponsored by CAWCD known as Project ADD Water ("ADD" stands for acquisition, development and distribution). This process was established to address CAWCD Board of Director's 2006 Strategic Plan objective that "CAP, as owner/operator of the CAP system is lead agency" in establishing "a collaborative process to determine when new supplies need to be acquired and what entities get those supplies." The object of Project ADD Water is to identify how new sources of supplies could be distributed and paid for to serve future needs in the three-county CAP service and taxing district.

As Arizona's water planners continue to deliberate how future water supplies will be acquired, shared and paid for, the commitments made in adopting AWS requirements in GMA must be maintained. Some of the underlying assumptions that were made in drafting GMA will be important in the development of future water supplies.

GMA ASSUMPTIONS INCLUDED:

- Existing investment in water supplies must be protected. Prior to the enactment of GMA, water users had made significant investment in water development. These investments were protected through the provisions of GMA.
- Development of future water supplies must not harm existing water users. GMA recognized that in order to succeed, existing rights to use of water must be protected.
- New water supplies must be developed. The management plan requirements and AWS requirements reflect the recognition that new supplies will be needed in order to achieve water management goals.
- Future water supplies will be more expensive. The era of cheap water is over. The construction and operation of CAP imposed significant costs on CAP water users and future projects will impose even greater costs.
- Investments must be made in obtaining water supplies and constructing infrastructure so that an AWS is developed prior to future growth. Even if CAGRDR is a mechanism to meet AWS requirements, CAGRDR must take steps to demonstrate that long-term water supplies will be available for replenishment.
- Beneficiaries of new water supplies must pay based on the benefits received. Existing water users have planned well to meet their water needs. They have made the investments necessary to reduce their dependence on groundwater. Future development must make similar investments.

Preparing for Future Water Shortages

Drought is a reality in desert environments. Arizona has been very progressive in developing mechanisms to protect against the impacts of drought. With the passage of recharge and recovery statutes in 1987, Arizona established an important tool to store excess water supplies for times of water shortage — underground storage via recharge (see A.R.S. Title 45, Chapter 3.1). From 1987 through 2007, Arizona stored 5.25 million acre-feet of water underground for future use (ADWR Annual Report 2007). The water stored underground includes 4.6 million acre-feet of CAP water.

As Arizona developed recharge as a means to store water for future use, it became apparent that the recharge concept could also be a means to store excess CAP water while excess water is available in order

AZ Water Management

Banking Authority

to “firm” water supplies for municipal and industrial water users in the three-county CAWCD service area and for water users along the Colorado River. Arizona’s leaders recognized that since the Colorado River Basin Project Act of 1968 stipulated that Arizona’s right to water for CAP would be junior to all other users of Colorado River water at the time CAP was authorized, Arizona would have to be visionary in planning to minimize the impacts of a prolonged drought. The Arizona Water Banking Authority (AWBA) was created in 1996 to store Colorado River water underground in anticipation of future shortages on the Colorado River. Through 2008, AWBA has stored approximately 3.2 million acre-feet of water toward a goal of protecting CAP municipal and industrial (M&I) deliveries in times of drought.

Interstate Banking

The initial objective of AWBA was to firm CAP municipal and industrial priority water supplies for the CAWCD three-county service area and the Colorado River communities. It was soon recognized that the “water banking” concept could be used for interstate water banking purposes as well. AWBA has stored 527,520 acre-feet (which included 50,000 acre-feet previously stored by CAWCD and transferred to AWBA) pursuant to interstate water banking agreements for Nevada’s Southern Nevada Water Authority (SNWA). See Davenport, *TWR* #17. As part of these interstate banking agreements, SNWA agreed to pay \$100 million to Arizona for storage of 1.25 million acre-feet of water in Arizona. Pursuant to interstate water banking agreements, Arizona has also stored 89,000 acre-feet for the Metropolitan Water District of Southern California.

Recovery Planning

While Arizona has been very successful in storing water through AWBA, it is still necessary to complete the recovery planning necessary to ensure that that water will be available when it is needed. Arizona’s water users must develop plans to recover and finance recovery of water stored by AWBA for intrastate and interstate banking purposes.

In addition, the interstate water banking agreements have created obligations on the part of Arizona water users to store water pursuant to these agreements. Indications are that excess CAP water will become progressively less available as municipal and industrial water users continue to increase utilization of CAP supplies. Future sources of supply to meet banking obligations will need to be identified.

Financing

Maintaining financing for water banking purposes will also be a consideration. In the FY 2008-2009 state budget, the state legislature “swept” \$12.4 million from AWBA’s budget to help balance the state’s general fund. In the FY 2009-2010 budget, the legislature swept \$8.7 million from AWBA. As the state continues to face revenue shortfalls, it will be progressively more difficult to protect AWBA from these transfers. Nevertheless, the State of Arizona will continue to be obligated to fulfill interstate water banking obligations and water settlement agreement provisions.

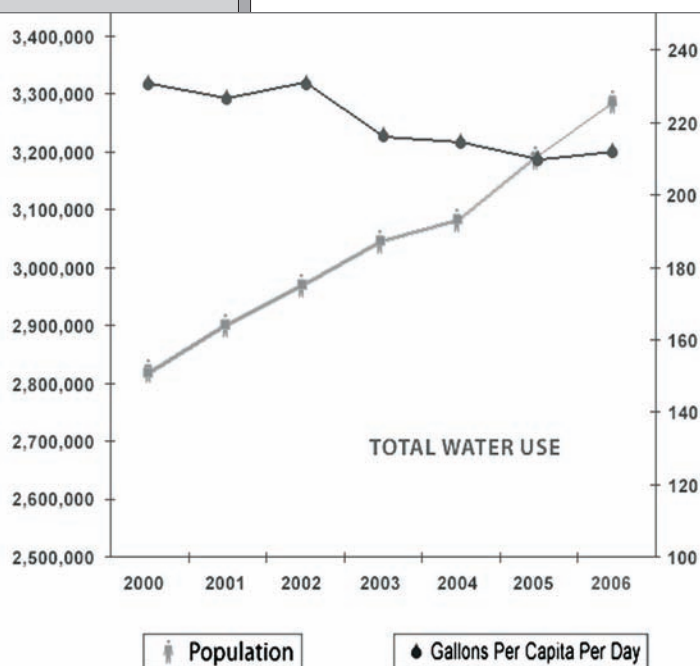
Conservation Requirements

Efficiency Requirements

One of the most successful components of the GMA has been the establishment of water use efficiency requirements in the First, Second and Third Management Plans. The statutory requirements for these management plans mandate progressively stricter conservation requirements, thereby constraining the amount of groundwater that may be used by various economic sectors. The statutory requirements for the fourth and fifth management plans state that the plans “may” include additional requirements for non-irrigation uses (basically, any uses other than farming), “if feasible.” See A.R.S. 45-567 and 568.

Arizona’s water users have made significant investments in implementing conservation programs in response to the management plan conservation requirements. As a result, Arizona’s municipal water providers have become national leaders in water conservation. Per capita water use among AMWUA members has declined significantly. Despite significant increases in population, total water use has remained relatively steady. Some of the decline in per capita use may be attributed to increased water use efficiency in modern indoor fixtures and plumbing devices. Declines in outdoor water use are the result of increased use of Xeriscape landscape designs and new irrigation technologies.

Arizona’s water managers have focused on conservation programs that reflect community values, protect economic well-being, and maintain quality of life. Because of this dedication to effective water management, Arizona has been able to avoid the desperate water use reduction programs that we have seen in other states that are just now beginning to make the commitments Arizona made with passage of GMA. Conservation in Arizona is being achieved through careful planning — not at a significant cost to Arizona’s water users. Arizona can, and must, continue to be a national leader in conservation.



Source: 2006 Arizona Municipal Water Users Association

AZ Water Management

Conservation Measures

Safe-Yield Tools

Sustainable Supply

Construction Permits

July 2010 Start Date

EXAMPLES OF EFFECTIVE AMWUA-IMPLEMENTED CONSERVATION MEASURES INCLUDE:

- Innovative Xeriscape programs
- Indoor water conservation programs mandating installation of water efficient plumbing fixtures, plumbing rebate programs, and retrofit programs
- Rebates for conversion of landscapes, installation of conservation-oriented irrigation controllers, and installation of water conserving plumbing devices as appropriate to their communities
- Stringent irrigation requirements for golf courses and green spaces, including conversion to non-potable water supplies
- Restrictions on uses of potable supplies in man-made lakes and fountains
- Extensive education programs to ensure that a culture of conservation is growing. Arizona citizens are very aware that enough water is available to meet the needs of their communities, but water must be used wisely. The "Water Use It Wisely" education program has provided the conservation message to Arizona's water users for over 10 years.

Our growing communities are also illustrating the effectiveness of management plan requirements. We are seeing installation of state-of-the-art water conserving plumbing fixtures and landscape plans in our newer communities. Conservation is being achieved without harm to economic development. The Fourth and Fifth Management Plans must reflect advancements in conservation, new technologies and continuing public awareness. Water managers must incorporate these tools in meeting water management objectives.

Additional, more stringent, conservation requirements, however, will not be enough to achieve safe-yield. Conservation will continue to be an important tool, but the achievement of safe-yield will require a wide array of water management tools.

Conclusion

Arizona has made tremendous progress in managing water supplies since the passage of the Groundwater Management Act in 1980. While Arizonans have addressed the need to adjust some of the Act's management tools, the state has remained committed to the fundamental principles of the Act. One of the most fundamental of these principles is the necessity for future development to be based on sustainable water supplies. This long-term perspective in water resources planning has served the state well. Arizona's leaders must maintain this dedication as future water management issues are addressed.

FOR ADDITIONAL INFORMATION: STEVE OLSON, 602/ 248-8482 or email: solson@amwua.org
ARIZONA WATER STATUTES: www.azleg.state.az.us/ArizonaRevisedStatutes.asp?Title=45.

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CALIFORNIA STORM WATER REGULATION

STATE INTENSIFIES REGULATION OF RUNOFF FROM CONSTRUCTION SITES

by Wendy L. Manley, Wendel Rosen Black & Dean, LLP (Oakland, CA)

After considering multiple drafts over several years, the California Water Resources Control Board finally adopted a new general permit for construction site storm runoff on September 2nd. The new permit is substantially different from the prior permit, with an entirely new approach and a number of new requirements. The regulated community will appreciate having until July of 2010 to become familiar with the new requirements and to update their construction site practices.

Risk-Based Approach

The new permit attempts to deal with the wide range of construction projects by employing a risk-based approach. The particular requirements applicable to a site depend on whether the site poses a low, medium or high risk to water quality. Dischargers determine a site's risk level by assessing the sediment

California Storm Water

Risk Assessment

Numeric Standards

Active Treatment

Post Construction Controls

Electronic Submission

transport risk and the receiving water risk. Erosive soils and proximity to sediment impaired receiving waters signal a higher risk site. Low risk sites (Risk Level 1) enjoy less stringent requirements than medium and high risk sites. For example, low risk sites need not prepare a Rain Event Action Plan or conduct routine sampling. Large, high risk sites (Risk Level 3) must complete a bioassessment of receiving waters before and after project construction. Active construction sites permitted under the existing permit on or before July, 2010 will be grandfathered in at Risk Level 1.

Numeric Standards

The new permit is notable as the first statewide general storm water permit in California with numeric standards. Medium and high risk sites must meet Numeric Effluent Limits (NELs) for turbidity (500 NTU) and pH (lower limit 6.0, upper limit 9.0). Nephelometric turbidity units (NTUs — a measure of particulate concentration using light transmission) were used to enable field measurements. Exceeding an NEL is a permit violation that can trigger minimum mandatory penalties (more than four violations in six months). The permit also contains “numeric action levels” (NALs) for turbidity (250 NTU) and pH (below 6.5 or above 8.5). Although NALs are not enforceable, exceeding an NAL, like an NEL, triggers reporting requirements and corrective action.

The prospect of including NELs in storm water permits has been controversial in California for some time. So much so that the State Board delayed permit development and convened a panel of experts in 2005 to determine the feasibility of NELs in storm water permits. Despite the panel’s finding (with reservations), that NELs are not feasible for construction except where active treatment systems are employed, the State Board established an NEL for turbidity in the new permit for all high risk sites. Active treatment systems use chemicals to facilitate flocculation or coagulation of suspended sediment particles. Some in the construction industry estimate as many as 80% or more of all construction sites may be Risk Level 3. In addition, many are critical of the State’s establishment of a turbidity limit based on best professional judgment rather than scientific data, particularly given that the US Environmental Protection Agency is expected to issue effluent limitation guidelines for construction by the end of the year.

Other Permit Requirements

Other new requirements in the new permit include: a “Rain Event Action Plan” for medium and high risk sites; minimum credentials and training for those who prepare or implement a site’s Storm Water Pollution Prevention Plan; separate requirements for linear underground and overhead projects (LUPs); and post-construction controls. The post construction requirement was also contentious because it reaches back to the design phase of a project, long before the permit applies. The volume of runoff from a completed project must match pre-project hydrology, up to the 85th percentile storm event. Just before voting to adopt the permit, the State Board decided to delay implementation of the post-construction requirement for three years to allow time for projects in the pipeline to be completed under existing rules.

With this permit, the State Board goes electronic — all enrollment and reporting documentation will be submitted on-line. The new permit also requires more extensive submittals than ever before, including, for the first time, a site’s Storm Water Pollution Prevention Plan, which will be posted along with other documentation for public review. Many are predicting that the complexity of the new 285-page permit in combination with electronic reporting, will produce unprecedented enforcement by both the State and citizen enforcers.

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FINAL CALIFORNIA STORM WATER PERMIT IS POSTED AT:

www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

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Snake Basin Adjudication

Adjudication Lessons

McCarran Amendment

SNAKE RIVER BASIN ADJUDICATION

LESSONS LEARNED

by Eric J. Wildman, Staff Attorney for Snake River Basin Adjudication
and Coeur D'Alene-Spokane River Basin Adjudication

Introduction

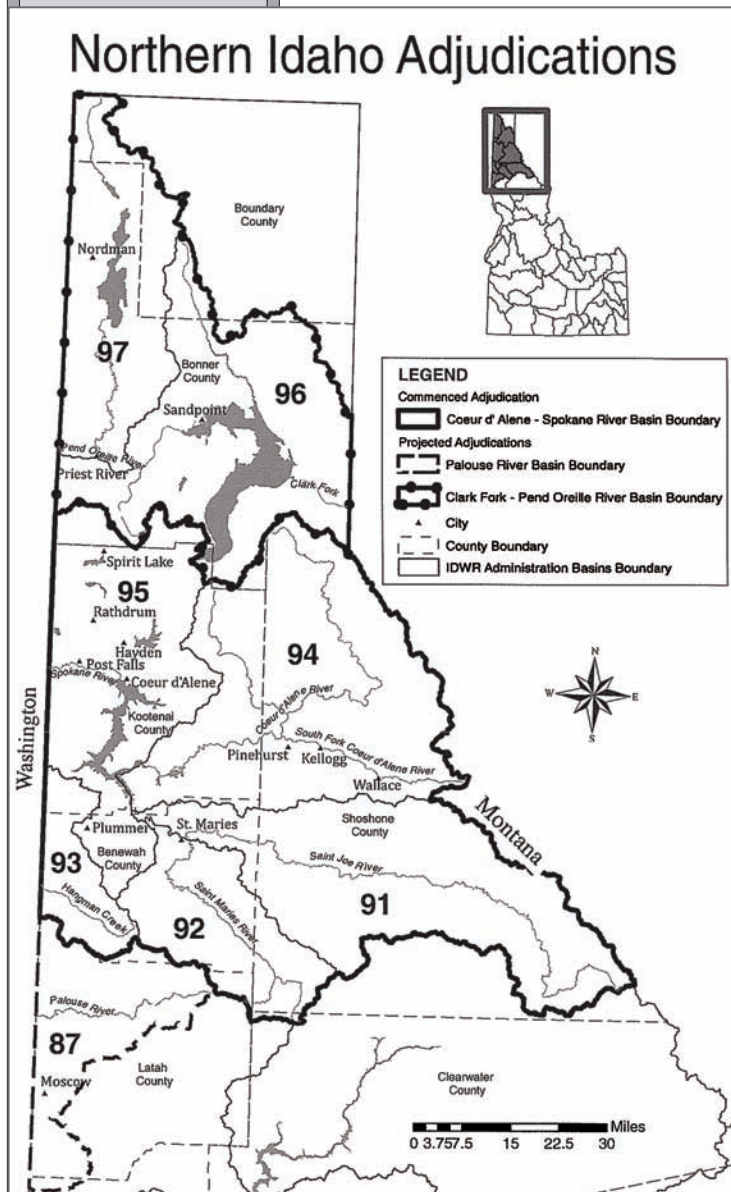
This article identifies and explains some of the more significant lessons learned over the course of the Snake River Basin Adjudication (SRBA). In some cases the lessons were learned “the hard way,” either resulting in delay or the need for an exercise in problem solving. In other cases, an outcome initially thought to be a setback turned out to be serendipitous. Then again, sometimes the lesson learned was that the right course of action was taken from the beginning. Needless to say, commencing and administering a general adjudication is a significant undertaking. Lacking a crystal ball, it is difficult to anticipate all of the possible pitfalls and unintended consequences which may result from the multitude of legal, procedural and administrative decisions issued over the length of time it takes to complete a general stream adjudication.

Although input was sought from attorneys, Idaho Department of Water Resources (IDWR), and SRBA staff, the lessons discussed in this article are those of the author. Practitioners who routinely practice in SRBA and the lawyers and agents of IDWR may have an entirely different perspective. However, most people agree that SRBA is steadily moving towards completion and the issuance of a final unified decree. When complete, the SRBA Court will have issued over 150,500 Partial Decrees. To date the SRBA Court has issued over 142,000 Partial Decrees.

While not a crystal ball, the lessons learned in SRBA may be the next best thing with respect to the future adjudications authorized to take place in north Idaho, including the recently commenced Coeur d'Alene-Spokane River Basin Adjudication (CSRBA). Issues pertaining to the federal McCarran Amendment, the constitutionality of Idaho's adjudication statutes, jurisdictional issues, and notice and due process issues (to name a few), have already been resolved in the context of SRBA. Simply put, there will be less uncharted territory in CSRBA than in SRBA. Other states now struggling to either commence a general adjudication or to keep their on-going adjudications on track have also benefited from SRBA lessons.

Geographic Scope of SRBA for McCarran Purposes

Early on, the SRBA Court had to determine the geographic scope of SRBA. This was significant because in addition to defining claims based on state law, SRBA was also intended to define water rights based on federal law, namely those rights belonging to the United States and Indian tribes. The US and Indian tribes are not normally required to litigate in state courts. An exception to that rule was created through the McCarran Amendment, 43 U.S.C. § 666, which waives sovereign immunity in some adjudications conducted in state courts. The McCarran Amendment, however, limits the US' waiver of sovereign immunity to those adjudications which cover “a river system.” The issue arose as to whether the Amendment required the inclusion of the four previously adjudicated tributaries of the Snake River (Payette, Lemhi, Boise, and Weiser) to be included in SRBA. The SRBA Court held that McCarran jurisdiction required the inclusion of these tributaries. The Idaho Supreme Court affirmed, holding the McCarran Amendment required the adjudication of all rights of a river system including tributaries and groundwater. *In re Snake River Basin Water System*, 115 Idaho 1, 832 P.2d 289 (1992), cert denied 490 U.S. 1005 (1989). As a result, SRBA was defined to include all surface and groundwater tributary to the Snake River, which encompasses 87% of the geographic area of the State of Idaho. The Idaho Supreme Court consolidated the incomplete Payette Adjudication with SRBA, and certain federal claims that were not adjudicated in the Lemhi Adjudication were addressed in SRBA.



Snake Basin Adjudication

Prior Decrees

Although the ruling greatly expanded the geographic area of SRBA, the prior adjudications did not become meaningless. As a matter of law, parties to prior adjudications and their successors are bound by prior decrees and cannot use SRBA to collaterally attack previous decisions. *State v. Hagerman Water Right Owners, Inc.*, 130 Idaho 736, 947 P.2d 409 (1997). This significantly limits the issues that can be raised with respect to previously adjudicated rights. In SRBA, this same reasoning has been extended to licenses. *Order on Challenge (Consolidated Issues) of "Facility Volume" Issue and "Additional Evidence" Issue*, subcases 36-02708 et al. (Dec. 29, 1999) held that SRBA was not the appropriate forum for collaterally attacking licenses previously issued through administrative proceedings. IDWR's investigation in most cases can rely on a prior decree, absent a subsequent transfer, abandonment or forfeiture. Prior decrees, however, are not always dispositive (finally decisive) because of ambiguities, issues over general provisions, and the omission of more specific elements that are now required by statute. See Idaho Code (I.C.) § 42-1427 (acknowledging that many previously decreed rights were only defined by source, priority date and diversion rate.)

Lesson learned: When considering the adjudication of claims based on federal law the court must carefully consider whether the adjudication complies with the McCarran Amendment.

The United States, Indian Tribes and Filing Fees

Filing Fees Denied

The State of Idaho wanted to adjudicate the water rights based on federal law in SRBA and therefore carefully considered how to comply with the McCarran Amendment. However, the inclusion of the US and Indian tribes as parties had some unintended consequences. The Idaho Legislature intended that SRBA be funded in part through the collection of filing fees. By statute, SRBA fees are calculated based on the number of irrigated acres or other measures of the size of the water right claim. Based on these calculations, by far the largest claimant in SRBA is the US. However, the US challenged the State's authority to impose fees on it. Both the SRBA Court and the Idaho Supreme Court held that the US could be required to pay filing fees. The United States Supreme Court overruled, holding that the US could not be required to pay filing fees. *United States v. Idaho*, 508 U.S. 1, 113 S.Ct. 1893 (1993). The SRBA Court later extended this same reasoning to Indian tribes filing claims on their own behalf. *Order Denying Motion to Dismiss for Failure to Pay Filing Fees*, Consolidated Subcase 03-10080 (Shoshone-Bannock Tribes) (November 1, 2001). No appeal was taken from this ruling.

Lesson learned: In the Coeur D'Alene-Spokane River Basin Adjudication there is no expectation that the United States or Indian tribes will pay filing fees.

Jurisdiction and Venue of the SRBA Court

IDWR Removal

It was initially assumed that the SRBA Court would have jurisdiction over *all* water disputes within its defined geographic boundaries. However, that has not proven to be the case. The question of whether the SRBA Court has jurisdiction over a particular case or cause of action involving water rights is not black and white. Immediately following commencement of SRBA, disputes originating over the elements of a water right were not always transferred to SRBA. In *Walker v. Big Lost Irr. Dist.*, 124 Idaho 78, 856 P.2d 868 (1993), the Idaho Supreme Court held that the SRBA Court had exclusive jurisdiction over disputes to the right to use water within the geographic scope of the adjudication. For a time, every dispute involving a water right was transferred to SRBA. However, after IDWR was removed as a party in SRBA, the Idaho Supreme Court held that SRBA lacked jurisdiction to preside over declaratory judgment actions where IDWR was required to be a party. *Twin Falls Canal Co. v. IDWR*, 127 Idaho 688, 905 P.2d 89 (1995).

Non-Water Issues

Subsequently, another line of cases held that if non-water issues are inextricably linked to water disputes, the non-water issues should be decided outside of SRBA. *Bischoff v. Salem Union Canal Co.*, 130 Idaho 455, 943 P.2d 45 (1997); *Riley v. Rowen*, 131 Idaho 831, 965 P.2d 191 (1998). For example, disputes over water rights which emerge in the context of divorces, real estate disputes, wills, trespass, corporate ultra vires actions and civil assault are typically not resolved in SRBA. The Idaho Supreme Court did not go as far as to hold that the SRBA Court lacks jurisdiction to hear these disputes, however. Resolution of disputes over water rights frequently involves the interpretation of old decrees, deeds and other instruments of conveyance. SRBA frequently decides issues involving these types of disputes.

Forfeiture Case

Another limitation on SRBA's jurisdiction resulted from the case of *Sagewillow, Inc. v. IDWR*, 135 Idaho 24, 13 P.3d 855 (2000). In *Sagewillow*, the Idaho Supreme Court held that the review of a forfeiture dispute (non-use of a water right results in loss of the right) originating in an administrative transfer proceeding was within the exclusive jurisdiction of SRBA. In 2001, the Idaho Legislature essentially amended that ruling by enacting I.C. § 42-1401D. That statute provides that review of an agency decision of IDWR must be reviewed pursuant to the Idaho Administrative Procedures Act, which means the case is reviewed in an Idaho District Court other than the SRBA Court. Consequently, the SRBA Court's practice has been to approach each case involving a water right combined with non-water right issues on a case-by-case basis. The SRBA Court then determines whether to hear the non-water related cause of action. If the SRBA Court determines SRBA is not the proper venue, then the SRBA Court issues an order transferring the case to the appropriate venue.

Lesson learned: If water issues are closely connected to non-water issues, jurisdiction and venue must be carefully considered.

Snake Basin Adjudication

IDWR Investigations

Changes & Transfers

Stockwater Claims

Consistent Rules

Distinctions Invalid

Delay Between the Filing of Claims Taking and IDWR's Investigation

Another lesson learned in SRBA involves the timing of the taking of claims (filing by water right owners) relative to the time the claims are anticipated to be reported in the IDWR Director's Report (Director's Report). Over 150,000 water right claims in the Snake River Basin have been filed with IDWR. IDWR has been "investigating" these water rights since 1990: IDWR must investigate all state law based claims and file Director's Reports recommending how and whether the claims should be decreed by the SRBA Court.

Following commencement of SRBA, claims were filed in the late 1980's and early 1990's. In some basins, there was quite a lag between the filing of the claims and the investigation and reporting by IDWR. In some cases the investigations did not take place until the mid-2000's. It was not anticipated at the outset that the process would take as long as it has. The result was that many ownership changes, splits and transfers occurred after claims were filed and a subcase was heard by the SRBA Court. Claimants didn't always notify IDWR or the SRBA Court of changes in ownership. Professionals involved in real estate transactions (i.e. agents, brokers and title companies) did not include change of ownership forms at closing. Failure to notify was extremely prevalent with respect to "de minimis" (minimal, legally inconsequential) domestic and stockwater claims (as defined by I.C. § 42-111). This ultimately hindered IDWR's investigation process because the (new) current owners of the water rights became difficult to find. In addition, changes to water rights occurred that required that claims be amended. IDWR and the SRBA Court made a midcourse adjustment to process the many de minimis claims quickly in order to avoid complications from the time lag.

Lesson learned: Claims taking (filing) should be staggered and scheduled closer in time to when IDWR's investigation is anticipated to take place. This lesson will be applied in the north Idaho adjudications.

Bifurcation of Reporting of De Minimis Claims

In an effort to minimize complications created by the time lag between the filing of claims and IDWR's investigation, separate Director's Reports were issued for de minimis domestic and stockwater rights, as opposed to the other water rights. However, an unforeseen consequence of this "bifurcated" reporting process occurred with respect to in-stream stockwater claims located on federal grazing allotments. Sometimes both the US and grazing allottees filed claims for the exact same water use. The US filed its claims as discrete in-stream claims so as to meet the criteria of a de minimis claim. However, some allottees filed their claims for the same use in the cumulative, based on use within the entire allotment, such that the claims did not meet the definition of de minimis. This practice led to the coining of the term "de maximus claim." As a result, claims for exactly the same use were reported in different Director's Reports. Needless to say, this led to confusion, case management problems, and challenges to due process.

Lesson learned: See previous lesson learned.

The SRBA Procedural Rules – Administrative Order 1

SRBA has its own set of procedural rules that supplement the Idaho Rules of Civil Procedure, Idaho Rules of Evidence, and the Idaho Appellate Rules. These rules are set forth in the SRBA's *Administrative Order 1 (AOI)*. *AOI* sets forth processes for providing adjudication-wide notice via the Docket Sheet: 1) a process for separating and consolidating common issues for resolution; and 2) a process for designating and deciding issues of basin-wide significance. The processes established in *AOI* have worked extremely well despite numerous challenges to their application. Early in the process, a significant amount of time was spent litigating the application and interpretation of the rules. As a result, the SRBA Court has been reluctant to amend the rules unless absolutely necessary. The consistency of *AOI* has allowed practitioners to rely on a consistent set of rules. In addition, retaining *AOI* without changes has avoided the creation of new unforeseen issues or unintended consequences. It is anticipated that the procedural rules will be substantially similar in the Coeur d'Alene – Spokane River Basin Adjudication for the same reason.

Lesson learned: "If it's not broken, don't fix it."

Distinction between Class I and Class II Subcases

Although *AOI* has served the SRBA Court and parties well, the rules are not perfect. *AOI* currently distinguishes between Class One and Class Two subcases and provides for a different process for the two classifications. *AOI* defines the two classes of subcases as follows:

- (1) Class One Subcase - Subcases where the difference between the Director's Report and the claim is less than 40 acres and/or the difference in quantity of the water involved is less than 0.80 cubic feet per second (cfs) and all claims where the objection relates only to owner identification, priority date, source, or point of diversion.
- (2) Class Two Subcase - Subcases not included in the definition of a Class One Subcase.

The purpose of separating subcases into two classifications was to expedite SRBA and provide claimants a speedy and cost effective method to litigate cases where the difference between the Director's Report and the claim is less significant, as in the Class One Subcases. This allows the SRBA Court, the parties, and IDWR to focus more time and resources on resolving the more significant issues associated with Class Two subcases.

Snake Basin Adjudication

Agency "Party" Status

This process has not turned out to work as it was intended. Experience has demonstrated that disputes over what were anticipated to be "less significant" Class I claims can be just as heated and time-consuming as those involving the "more significant issues associated with Class Two subcases." Thus, as a matter of course, the distinction between the two categories of subcases has been largely disregarded.

Lesson learned: The old adage "whiskey is for drinking and water is for fighting" didn't distinguish between quantities of water for good reason. The classification distinction will probably not be utilized in the north Idaho adjudications.

Changing IDWR's Status in the SRBA

In the first years of SRBA, IDWR was a "party" in the adjudication. The Attorney General of the State of Idaho designated IDWR as the entity through which the State of Idaho would appear in SRBA proceedings. In addition, IDWR was designated as a party to SRBA by statute. IDWR also performed many administrative functions in the investigation and reporting of water right claims. As a party, IDWR filed motions, briefs, pleadings, and litigated cases. At the time, some believed that IDWR's investigative role was in conflict with its party status. Consequently, the Idaho Legislature passed statutes in 1994 which revised and amended the SRBA statutory framework, removing IDWR as a party. I.C. § 42-1401B. The statutory amendments designated the IDWR Director as an independent expert witness. *Id.*

Basin-Wide Issue 2 came before the SRBA Court to test the validity of the 1994 legislation. The SRBA Court held that IDWR could not be removed as a party. The SRBA Court reasoned that IDWR had already acted as an adverse party to all water users in SRBA, and therefore could not serve as an independent expert. The Idaho Supreme Court reversed.

The Idaho Supreme Court held in *In re SRBA Case No. 39576*, 128 Idaho 246, 912 P.2d 614 (1995) that IDWR could be removed as a party because its role as a party was created by statute and therefore could be changed by statute. The Idaho Supreme Court ruled, however, that the Director could not be statutorily designated as an expert witness because only a court can determine whether a witness qualifies as an expert pursuant to the Idaho Rules of Evidence.

The removal of IDWR as a party was confusing to some at the time. As a party, IDWR filed Responses in virtually every subcase. It had appeared as a party to litigate in favor of the Director's Report. When IDWR was removed as a party, many claimants were confused about how to proceed. Who would step in and litigate in favor of the Director's Reports? The SRBA Court allowed additional time for any party to file a Response in favor of a Director's Report. Very few such responses were filed. In some instances, the State of Idaho responded in support of the Director's Report. In other instances a private party filed a Response. Although there was confusion at the beginning, the change in IDWR's role has significantly expedited the process.

IDWR's role is integral to the SRBA process. Its schedule in investigating and providing expert technical information requires close coordination with the SRBA Court. Changing IDWR's status from that of a party to that of a technical or expert advisor enabled some additional communications with the SRBA Court on scheduling, procedural and administrative issues. Additionally, IDWR's ability to communicate with claimants and/or objectors for purposes of facilitating settlement was greatly enhanced when IDWR was removed as an adversarial party.

A few consequences of the change were not predicted. The Idaho Supreme Court later held that summary judgment proceedings were not applicable in single party subcases. *State v. Hagerman Water Right Owners, Inc.*, 130 Idaho 736, 947 P.2d 409 (1997). [Editor's Note: A "summary judgment" is a decision made on the basis of statements and evidence presented for the record without a trial. It is used when there is no dispute as to the facts of the case, and one party is entitled to judgment as a matter of law.] The Special Masters were thus required to proceed with single-party trials (i.e. a situation where the claimant is the only objector to the Director's recommendation). IDWR's role in the process is normally limited to investigating and testifying as to the basis for its recommendation. The Idaho Attorney General's office has often intervened in subcases to advocate a particular recommendation where there are issues the State deems significant. However, absent intervention by the State, there is no party to advocate for or support the basis for IDWR's recommendation.

Lesson learned: The removal of IDWR as a party significantly advanced the progress of the SRBA.

Party Status of IDWR and Other State Agencies

The 1994 legislative amendments also addressed the manner in which the State of Idaho appeared in SRBA. The SRBA Court held that the State of Idaho acting through its various agencies could not take inconsistent positions in water cases. The SRBA Court reasoned that the State should be held to the same requirements as the United States in *U.S. v. New Mexico*, 438 U.S. 696 (1978). In response, the Idaho legislature amended SRBA statutes, allowing State agencies to take opposing positions.

Basin-Wide Issue 3 tested the issue of whether the 1994 amendments could allow the State of Idaho to appear as multiple parties. Before the enactment of the 1994 amendments, the State of Idaho appeared only once in each matter or contested issue in the SRBA, through IDWR. In essence, the State was required to speak with only "one voice," even though various State agencies (including IDWR) may have held differing positions in the matter or issue before the SRBA Court. The SRBA Court held that the State of

Expert Status Question

Benefits of Removal

Single-Party Trials

Agency Consistency

Snake Basin Adjudication

Multiple Party Appearances

Idaho could only appear once in SRBA, following the logic of *U.S. v. New Mexico*, and based on principles of due process, fundamental fairness, the political question doctrine, and the fact that allowing the State to appear multiple times on behalf of different agencies could affect the US' waiver of sovereign immunity under the McCarran Amendment.

The Idaho Supreme Court disagreed. In *In re SRBA Case No. 39576*, 128 Idaho 246, 912 P.2d 614 (1995), the Idaho Supreme Court held that no due process violations occurred when State agencies appeared separately. The Idaho Supreme Court held that no party to the adjudication would be deprived of an opportunity to be heard at a meaningful time in a meaningful manner if the State were to appear as multiple parties. Because the Idaho Constitution gives courts the authority to determine the priority of water rights, the political question doctrine did not prohibit the SRBA Court from exercising its jurisdiction over State agencies. [Editor's Note: The "political question doctrine" involves a situation where the federal courts refuse to decide an issue because it is properly subject to the decision-making authority of elected officials.]

Lesson learned: Although SRBA subcases were stayed for a time to allow review of the statutory language the process has worked just fine.

Notice and Due Process in the SRBA

Notice of the commencement of the adjudication, and first and second round service, were defined by statute. See I.C. § 42-1408. Notice procedures within SRBA are set forth in *Administrative Order 1*. The SRBA Docket Sheet procedure provides adjudication-wide notice. The Docket Sheet Procedure is used to give notice to parties in the adjudication about matters that are not a part of a subcase (see Procedures in the SRBA: www.srba.state.id.us/doc/AO1NA.htm#SHEET). Docket Sheet notice has been effective particularly in conjunction with the Internet. Due process challenges were raised with respect to notice procedures in the SRBA in 2003. The Idaho Supreme Court upheld the constitutionality of the notice procedures. However, it would have been a "little late in the game" to find out that the notice procedures were deficient. *LU Ranching Co. v. United States*, 138 Idaho 606, 67 P.3d 85 (2003). In hindsight, it might have been prudent to designate the issue as a basin-wide issue and have the process confirmed or rejected from the outset.

Lesson learned: The Notice process for the north Idaho adjudications will be similar to that utilized in the SRBA because the process has already passed constitutional muster.

Tolling of the Forfeiture Statute

This issue is somewhat related to the delay between the filing of the claims and IDWR's investigation. A considerable amount of time was expended addressing forfeiture alleged to have accrued after a claim was filed, as well as at all subsequent stages of the proceedings. A subcase could be fully litigated before a Special Master and/or the Presiding Judge — then parties would seek to have the subcase reopened because the five-year forfeiture period had just run. The validity of the claim would potentially have to be re-adjudicated based on the issue of forfeiture. The SRBA Court resolved the issue by analogizing the filing of a claim to a quiet title action. A quiet title action tolls the running of the statute of limitations. [Editor's Note: "tolls" means that at that point, no additional time accrues that could lead to the statute of limitations being met; "statutes of limitations" are laws setting deadlines for filing lawsuits within a certain time after events occur that are the source of a claim.] *Order on Challenge (Consolidated Issues) of "Facility Volume" Issue and "Additional Evidence" Issue*, subcases 36-02708 et al. (Dec. 29, 1999). No appeal was taken from this decision. This ruling remains the law-of-the-case. As a result, the forfeiture period runs anew (starts again) from the date the Partial Decree is issued.

Lesson learned: The tolling ruling has advanced the progress of SRBA.

The Dilemma of Prior Decrees

Idaho has experienced litigation over water right disputes since the early days of statehood. Consequently, numerous prior decrees by both state and federal courts have had a lasting impact. Parties to the prior decree, or their successors-in-interest, often base their SRBA claim on a portion of a water right adjudicated under a prior decree.

Problems arise however, when the quantities claimed in SRBA — and derived from a prior decree — exceed the quantity originally decreed for the water right. The problem can be illustrated as follows. Take a prior decree adjudicating 10 cfs as being appurtenant to a particular tract of land. Subsequently, over the years through intermediate conveyances the land is subdivided into smaller parcels, and those parcels into even smaller parcels. Some of the instruments of conveyance might expressly mention quantity, others might have only mentioned "appurtenant water rights," and others may be silent as to water rights. Ultimately, the cumulative amount of the previously apportioned quantities claimed by all parties owning a portion of the original tract of land and appurtenant water right should reconcile with the original 10 cfs. Unfortunately, this has not always been the case. Parties sometimes did not object to other claims derived from the same decreed right because competing claims are not easily identified. Oftentimes parties were not aware that the total of the quantities claimed on the source of the right exceeded the quantity originally decreed. As a result, the first claimants to have their rights decreed may have their claims fully decreed leaving the rest of the claimants to fight for the remaining available quantity, which is insufficient to satisfy

Docket Sheet Notice

Forfeiture Actions

Split Rights

Subdivided Land

Snake Basin Adjudication

Fixed Period

Logistical Problems

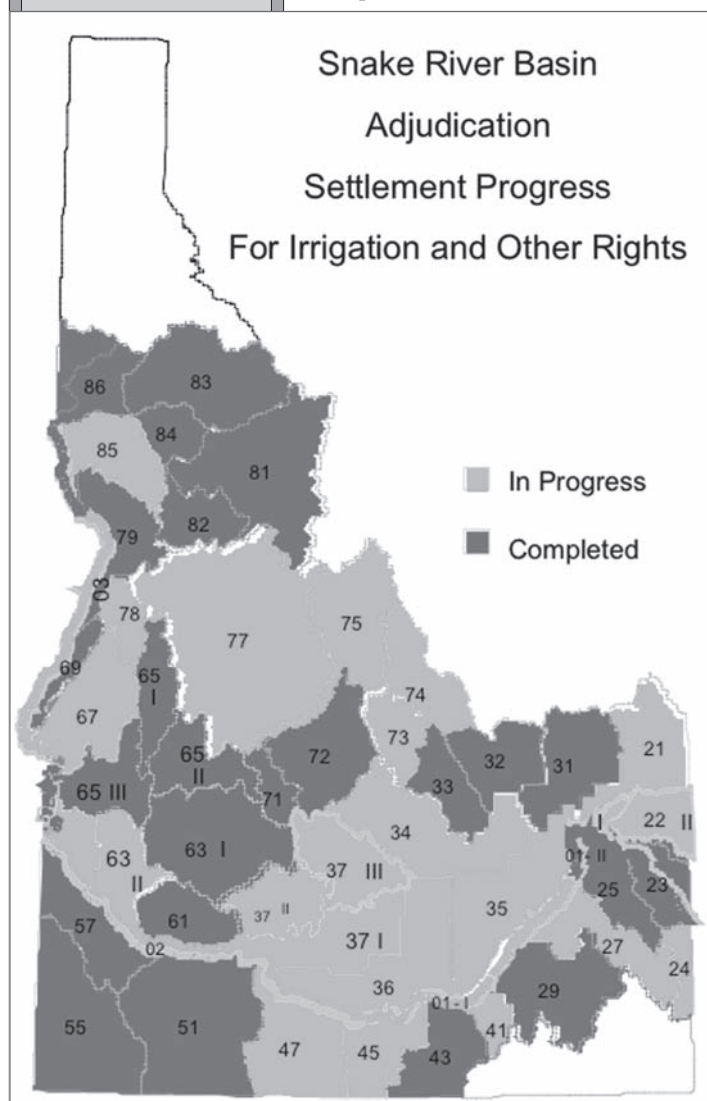
General Provisions

their individual claims. To avoid this pitfall the SRBA Court has identified parties claiming under a portion of a prior decree and brought them all into a common proceeding.

Lesson learned: Identify all claims based on each water right from a prior decree and bring them into a common proceeding prior to issuing Partial Decrees.

Amendment of Period of Use Element for Irrigation Rights

The SRBA Court originally held that the period of use for irrigation rights was not a fixed period. The SRBA Court reasoned that the growing season fluctuated from year to year based on the weather. As a result, Partial Decrees for irrigation rights initially listed the period of use as “the irrigation season.” This practice was challenged in *A&B Irr. Dist. v. Idaho Conservation League*, 131 Idaho 411, 423, 958 P.2d 568 (1997). The Idaho Supreme Court held that the period of use for each irrigation water right had to be identified by specific dates, not merely by reference to “irrigation season.” The Supreme Court reasoned that leaving the period of use element unspecified would conflict with Idaho law and would leave thousands of decrees in limbo. Unfortunately, the challenge to the practice occurred after most of the Partial Decrees for the three test basins (34, 36, and 57 — see map) had already been issued. As a result, the SRBA Court had to amend the Partial Decrees to include specific dates for the period of use. This required IDWR to investigate and file Supplemental Director’s Reports for the period of use. Additional objection and response periods were also necessary following the change. This created logistical problems because transfers and splits of water rights had occurred after Partial Decrees were issued. In addition, the SRBA Court couldn’t simply amend the period of use element for the Partial Decree if the water right had subsequently been split or transferred. The solution was to amend the decrees nunc pro tunc. [Editor’s Note: Nunc pro tunc literally means “now for then.” This phrase is used to express that a thing is done at one time which ought to have been performed at another. Leave of court (judicial permission) must be obtained to do things nunc pro tunc, and this is granted to answer the purposes of justice, but never to do injustice. A judgment nunc pro tunc can be entered only when the delay has arisen from the act of the court.]



A similar problem occurred in the three test basins with respect to general provisions. Initially, the general provisions were recommended and decreed in the face of the Partial Decrees for the test basins. However, because general provisions apply to a number of water rights they are typically litigated on a separate track than individual subcases and involve a large number of parties. The issue of the necessity of a general provision on conjunctive management was still being litigated when the Partial Decrees for the three test basins were issued. [Editor’s Note: “conjunctive management” involves the combined administration and regulation of both groundwater and surface water.] Because the outcome would have potentially required that Partial Decrees already issued be amended and because of concerns delaying the issuance of a Partial Decree until all issues pertaining to general provisions had been resolved, it became readily apparent that it did not make sense to recommend or include general provisions in the face of the Partial Decree.

Lesson learned: This issue regarding the period of use would have been difficult to foresee. The longer decrees are withheld from being issued, the greater the likelihood that intervening changes in ownership and transfers of water rights would add additional complexities. However, to avoid having to amend Partial Decrees due to general provisions the SRBA Court generally opts to not include general provisions on the face of the Partial Decree. Instead, the SRBA Court now includes the following language in the face of the Partial Decree: This Partial Decree is subject to such general provisions necessary for the definition of the rights or for the efficient administration of the water rights as may be ultimately determined by the Court at a point in time no later than the entry of a final unified decree. I.C. Section 42-1412(6).

Flexible Use of Telephone Participation and New Technologies

Due to the large geographic area encompassed by SRBA, the SRBA Court is extremely generous in allowing the use of telephone participation. In most cases, after the Initial Hearings parties are allowed to appear by telephone unless they must offer evidence. The SRBA Court is now working with video

Snake Basin Adjudication

Electronic Communication

"Dual Track"

Pro Se Litigants

teleconferencing in preparation for the north Idaho adjudications. This may allow parties in many cases to appear from remote locations even if there is an offer of evidence. Many hearings do not involve weighing the credibility of testimony, but rather turn on the interpretation of old documents. The SRBA Court now scans all documents that can be accessed via the Register of Actions. Documents can be accessed from the SRBA website and downloaded at no charge. The SRBA Docket Sheet can also be accessed from the SRBA website. The SRBA Court is currently experimenting with electronic filing for the north Idaho adjudications.

Lesson learned: Because of the large geographic area encompassed by a general adjudication it is important to minimize impediments resulting from the location of the courthouse as much as possible.

Multiple Opportunities for Encouraging Settlement

Litigation is expensive. The SRBA Court has always acknowledged the stress and cost that trial can impose on parties. Therefore, both IDWR and the SRBA Court have developed processes to give parties multiple opportunities to discuss settlement. IDWR sends a Preliminary Director's Report to claimants prior to the filing of the Director's Report with the SRBA Court. This gives the claimant an opportunity to communicate with IDWR and correct any discrepancies or errors early. The preliminary Director's Report often eliminates the need for the claimant to litigate through the filing of an Objection. After the Director's Reports have been filed, the Special Masters set contested cases for Initial Hearings. The purpose of the Initial Hearing is twofold: it allows an opportunity for parties to sit down with IDWR agents and attempt to work out a settlement. In the alternative, if no settlement is reached additional hearings are set. If the matter is set for trial, the process generally involves putting the case on a "dual track" — meaning a trial track as well as a settlement track.

Lessons learned: Parties are often more satisfied with the results of a settlement as opposed to a court-imposed decision. The time spent at the beginning of the process through Preliminary Director's Reports and Initial Hearings that encourage settlement is time well spent. The settlement process is more effective if the matter is placed on a dual track.

Listen to Claimants

Everyone the SRBA Court solicited in preparing this list of "lessons learned" emphasized the benefits of listening to the claimants. IDWR agents reminded us that many of the most important legal issues were raised by farmers, city managers, corporate officers, and representatives of state and federal agencies. The SRBA process has also benefited from an excellent group of lawyers who represent clients of all types. The SRBA Court has relied on these lawyers for high-quality briefing and oral presentations in order to make sound decisions. In addition, SRBA has made a concerted effort to keep the process available to parties that appear pro se (without legal representation). Standard Forms and Public Information meetings have been important to make the process accessible to everyone. Many of the important issues raised were brought forth by pro se litigants. The pro se litigants often benefited from watching the "water lawyers" who made presentations before the SRBA Court. Finally, mistakes on elements the SRBA Court could have made were sometimes averted because government workers were listening in as they waited for their own cases. These government workers, both state and federal, acted as good citizens in helping keep the SRBA Court and the public informed on cases where they were not parties.

Lesson Learned: Keep the process open and user-friendly.

Conclusion

While the lessons discussed in this article are by no means exhaustive they include some of the matters, which in the opinion of the author, have had a broad impact on the continued progress of SRBA. These lessons should prove invaluable when applied to the forthcoming north Idaho adjudications, as well as provide practical insights to other states grappling with general stream adjudications, since it is unlikely that gazing into a crystal ball will be a viable option anytime soon.

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Eric J. Wildman, is the Staff Attorney for the Snake River Basin Adjudication (SRBA) and the recently commenced Coeur D'Alene-Spokane River Basin Adjudication (CSRBA). Eric is responsible for the management and progress of both adjudications including advising and assisting the Presiding Judge with decisions in all aspects of the two adjudications. Eric has worked under three of the four judges who have presided over the SRBA. Eric has also provided advice and assistance to other western states with respect to their water adjudications and speaks frequently on the topics of the SRBA and CSRBA. Previously, Eric worked as a law clerk for the Hon. R. Barry Wood who later became a Presiding Judge of the SRBA. Thereafter, Eric worked in private general practice at Arkoosh Law Offices, Chtd. in Gooding, Idaho. Eric received his undergraduate degree from the University of Utah and his Juris Doctorate from the University of Idaho College of Law.

WATER BRIEFS

EVAPOTRANSPIRATION MAPPING – IDAHO INNOVATION RECEIVES AWARD

The Ash Institute for Democratic Governance and Innovation at the John F. Kennedy School of Government at Harvard University announced on September 15 that Idaho's Mapping Evapotranspiration program is a 2009 Innovations in American Government Award winner. The high tech method employs satellite imagery to track water usage down to the level of individual fields. In collaboration with the University of Idaho, Idaho's Department of Water Resources (IDWR) is the first government agency in the nation to develop and use satellite-based evapotranspiration imagery to enhance the understanding of agricultural water usage in the state. Because over 90% of Idaho's water is used for irrigating agriculture and rainfall amounts remain low, regional water supply disputes continue to grow. Such data is integral to settling water demand conflicts and offers more accurate and detailed mapping than previous estimates. Mapping Evapotranspiration will receive a grant towards disseminating its innovation around the nation.

Evapotranspiration is defined as the water evaporated from soil and transpired from vegetation. Through the Mapping Evapotranspiration program, Landsat satellites provide visual and thermal images that are processed to determine the state's irrigated agricultural evapotranspiration. Such data is calculated on a daily, monthly, or seasonal basis and utilizes weather information to provide more precise imagery. The process is much less expensive and more efficient to calculate than former methods. Individual Landsat images use 30 million pixels to map and track water usage from areas as large as 10,000 square miles to as small as a single 40-acre field. Previous calculations for quantifying water usage were limited to regional maps with no capability for historical comparison. By tracking usage on a field by field basis, the state can more effectively understand and regulate water use and compare it to past archived usage data.

"Mapping evapotranspiration is important because it shows the amount of water used to irrigate crops — over 90% of all water consumed in Idaho. In the past, we mapped where water was being used for irrigation, now we can quantify the total amount used," said Bill Kramber, senior remote sensing analyst at the Idaho Department of Water Resources.

Idaho has enjoyed multiple uses for evapotranspiration data beyond what was originally conceived. During droughts, evapotranspiration data acts as a basis for determining water shortages. In addition, lawyers have started to use evapotranspiration data to help defend water rights. Residents using water in excess of their rights may be more easily tracked and regulated. Evapotranspiration data can also be used to more cost-effectively monitor groundwater pumped out of aquifers for irrigation wells. While current electricity record calculations cost \$119 per well per year, using evapotranspiration data for such monitoring drops the cost to \$22. Finally, IDWR staff used such data in collaboration with farmers, the US Bureau of Reclamation, and wildlife professionals to implement stream flow restoration projects that ensure salmon and steelhead retain sufficient habitat. The federal fishery agencies currently use such data to determine the amount of water available for endangered species.

For info: Bob McLaughlin, IDWR, 208/ 287-4828, bob.mclaughlin@idwr.idaho.gov

IDWR WEBSITE: www.idwr.idaho.gov/GeographicInfo/METRIC/et.htm

INTERIM FLOWS – FRIANT DAM RELEASES CA

Additional water releases, called Interim Flows, from Friant Dam into the San Joaquin River began on October 1, 2009. The San Joaquin River Restoration Settlement Act was enacted by Congress in March 2009 authorizing and directing the Secretary of the Interior to implement all provisions in a Stipulation of Settlement (Settlement) in *NRDC et al., v. Kirk Rodgers, et al* reached in September 2006, including Interim Flow releases (see Dunning, *TWR* #33). These flows, which are experimental in nature, will provide valuable information regarding flows, temperatures, fish needs, seepage losses, shallow groundwater conditions, recirculation, recapture and reuse conditions, channel capacity (high and low flows), and levee stability. This information will be used in designing the major improvements needed in the river and informing the fish agencies as they craft a salmon reintroduction plan.

The releases will generally range from 350 cubic feet per second (cfs) to 1,600 cfs, with a maximum flow of 1,300 cfs reaching the Chowchilla Bifurcation Structure. These flow rates have been limited so that no flooding or seepage impacts are expected to occur and will be reduced as necessary if any such impacts are anticipated or observed to occur. The magnitude of Interim Flow releases after February 2010 will vary depending on the hydrology of the San Joaquin River watershed.

The Bureau of Reclamation (Reclamation) anticipates that some of the flows will be recaptured and recirculated, although the actual amount cannot be predicted at this time because it will depend largely on the amount lost to groundwater infiltration, potential reductions in flows to avoid seepage impacts along the river, safe flow passage amounts past Sack Dam, and the hydrologic and regulatory conditions in the Delta during the flows, among other things. For the most current information on the Interim Flows and real-time flow data, see: www.restoresjr.net.

Reclamation and the California Department of Water Resources (CDWR) have released the Final Environmental Assessment, Finding of No Significant Impact, Initial Study, and Mitigated Negative Declaration (EA/FONSI/IS/MND) for the San Joaquin River Restoration Program's (SJRRP) Water Year 2010 (WY 2010) Interim Flows Project (available at: www.restoresjr.net).

The Implementing Agencies responsible for the management of the SJRRP include: Reclamation; US Fish and Wildlife Service; National Marine Fisheries Service; CDWR; and the California Department of Fish and Game.

CDWR operates and maintains the State Water Project, provides dam safety and flood control and inspection services, assists local water districts in water management and water conservation planning, and plans for future statewide water needs.

For info: Pete Lucero, Reclamation, 916/ 978-5100 or email: plucero@usbr.gov; Ted Thomas, CDWR, 916/ 653-9712 or email: tthomas@water.ca.gov; CDWR WEBSITE: www.water.ca.gov

SJRRP WEBSITE: The Settlement in *NRDC et al. v. Kirk Rodgers et al.*, along with other SJRRP documents, are available.

WATER BRIEFS

RECLAMATION LIABLE – BREACH OF CONTRACT/TAKINGS US

The US Court of Appeals for the Federal Circuit (Court) issued a decision on September 30 holding the US Bureau of Reclamation (Reclamation) liable for breach of contract for failure to deliver water from New Melones reservoir to two San Joaquin County water districts from 1999 to 2004. The Court stated no opinion whether Reclamation might be liable as well for a “takings claim” of the water in 1994 and 1995, but noted that the plaintiffs were free to pursue their takings claim since the Court vacated the lower court’s dismissal of the takings claim. *Slip Op.* at 43. The plaintiffs in the case are Stockton East Water District (Stockton East) and Central San Joaquin Water Conservation District (Central), both located in Stockton, California. Attorney Jennifer L. Spaletta of Herum Crabtree Brown (Stockton) argued the case for the plaintiffs.

The lawsuit, which was filed in the U.S. Court of Federal Claims in Washington, D.C., arose out of Reclamation’s failure to deliver irrigation and drinking water to over 300,000 water users in the Central Valley of California from the New Melones reservoir since 1993. According to the water delivery contracts between the US and the water districts, Reclamation was obligated to deliver 155,000 acre-feet of New Melones water each year to these water users. Stockton East provides water to the city of Stockton and water users in the eastern portion of San Joaquin County, California. Central operates and maintains water facilities that convey water to agricultural water users on over 60,000 acres of land in San Joaquin County. The water at issue is from the New Melones Unit of the vast federal water resources project in California known as the Central Valley Project.

The US Court of Federal Claims, following an eight-day trial in 2007, held that although Reclamation’s obligations for water delivery were indeed breached, certain contract provisions gave the US the three affirmative defenses it claimed to the breach of contract. The Court of Appeals, however, rejected those defenses and remanded the case back to the trial court to determine monetary damages. Estimates of those damages range up to tens of millions of dollars for the substantial amount of waters — “probably in the hundreds of thousands of acre-feet” — that weren’t delivered to the plaintiffs in 1999-2004, according to Roger Marzulla, one of the attorneys for the plaintiffs.

“The court recognized that Reclamation did not have the authority to reallocate water for environmental needs based on changes in law and policy, and that the enactment and implementation of the Central Valley Project Improvement Act, calling for the release of water for fish restoration needs, did not constitute a sovereign act that would otherwise excuse Reclamation’s liability for breach of these binding agreements,” Marzulla explained. Marzulla told *The Water Report (TWR)* that the plaintiffs were “examining the possibility of pursuing the takings claim for 1994-1995.”

The decision by the Court of Appeals provides some precedential value to other similarly situated irrigation districts that hold contracts for water from federal projects. Nonetheless, the decision is very fact-oriented and is based on the specific contractual provisions involved. Much of the decision also turned on the “burden of persuasion” and the federal government’s failure to carry its burden regarding the actual cause of the shortages of water that occurred: “...the court must grant judgment for the plaintiff Districts with regard to each of the affirmative defenses for which the Government has failed to carry its burden of persuasion, applying the usual standards of proof for civil litigation. The proponent of the affirmative defense must prove all elements of the defense.” *Id.* at 25.

In a phone interview with *TWR*, Marzulla did point out that the Court’s decision “helps to define the defenses that the US is asserting” in this and other similar cases. Marzulla said that there were two important points in this regard. First, “the government strongly argued that contracts change as the regulations change,” but that assertion was rejected by the Court, which noted that this involves “the obvious question of whether making the contracts subject to whatever future federal law or policy may hold would make the contracts illusory.” *Id.* at 19. Marzulla also pointed to the Court’s holding that “state law limitations — notably the public trust, nuisance and waste — are a defense *only if* the US can show a causal link between the state law principle and the federal government’s decision to withhold the water.” In this case, the US introduced no evidence into the record that would prove the causal link and thus failed to carry their “burden of proof.”

For info: Jennifer L. Spaletta, Herum Crabtree Brown, 209/ 472-7700, jspaletta@herumcrabtree.com; Roger Marzulla, 202/ 822-6760, or www.marzulla.com
Decision available from *TWR*, email: thewaterreport@hotmail.com

**STORMWATER AGREEMENT TX
CONTRACTORS & AGENCIES**

Complying with the Clean Water Act (CWA) and keeping waters of the US free of pollution is the goal behind an agreement signed in October by TEXO, the Dallas-Ft. Worth Chapter of the Associated General Contractors and the Associated Builders and Contractors, the Texas Commission on Environmental Quality (TCEQ), and the US Environmental Protection Agency (EPA). Under state and federal law administered by TCEQ and EPA, it is a violation of law to discharge pollutant-laden stormwater into waters of the US or Texas without a permit and in compliance with the requirements of the Texas Water Code and the federal Clean Water Act. TEXO and its members are launching a voluntary pilot test of a program to comply with both regulations and thereby minimize and/or eliminate the discharge of those pollutants as runoff from construction sites.

The agreement commits TEXO members to work together with state and federal agencies to take steps in the pilot program to prevent stormwater pollution by educating and assisting members who voluntarily join the program. The program consists of an internal audit that each member performs at their construction site(s), an agreement to participate in the program, and an inspection of the site by TEXO’s environmental, safety, and health professionals. The agreement is similar to other programs in Texas that have or are reducing large amounts of pollutant carrying sediment and thereby reducing the costs of maintenance of waterways and protecting aquatic life in streams and rivers.

“The TCEQ is committed to exploring ways in which to partner with our regulated community to further advance the protection of our environment. This program, and TEXO’s commitment to further educate, inform and assist builders in meeting federal and state stormwater requirements will go a long way in helping us meet that goal,” said TCEQ’s John Sadlier, Deputy Director, Office of Compliance and Enforcement.

For info: Dave Bary, EPA, 214/ 665-2200 or r6press@epa.gov; EPA audio file at: www.epa.gov/region6/6xa/podcast/oct2009.html

WATER BRIEFS

EXEMPT WELLS

WA

AG'S OPINION ISSUED

On September 21, 2009, the State of Washington Attorney General's Office issued a formal opinion regarding the interpretation of statutes exempting certain withdrawals of groundwater from permitting requirements, and authorizing the State's Department of Ecology (Ecology) to withdraw waters from appropriation. Attorney General Opinion, September 21, 2009 - AGO 2009 No. 6. In Washington, certain withdrawals of groundwater are exempt from the general permitting requirement for water rights. These "exempt withdrawals" can be used for certain limited purposes, including water for lawns and non-commercial gardens not exceeding 1/2 acre, and for single or group domestic uses not exceeding 5,000 gallons per day.

Included in the Attorney General's opinion, were the conclusions that first, Ecology does not have the authority to impose lower or different limits on exempt withdrawals by "partially withdrawing" the waters of the applicable area from additional appropriations. Second, Ecology's authority "to withdraw water from new appropriation applies to both permitted and permit-exempt uses. This means that the withdrawal of water from further appropriation has the effect of precluding new exempt withdrawals, except that new appropriations that are mitigated for any consumptive use in equal or greater amount by existing trust water rights may be authorized." AG Opinion at 3. A "trust water right" is defined statutorily to mean "that portion of an existing water right, constituting net water savings, that is no longer required to be diverted for beneficial use due to the installation of a water conservation project that improves an existing system." RCW 90.38.010(3); *Id.* at 13.

The Opinion did clarify that "exempt withdrawals" are not exempt from regulation in Washington — they are merely exempt from the *permitting* requirement. AGO at 11.

For info: Ecology website: www.ecy.wa.gov/programs/wr/comp_enforce/gwpe.html

POWER PLANT DISCHARGE US

EPA REVISING WASTEWATER RULES

EPA plans to revise the existing standards for water discharges from coal-fired power plants to better protect America's water. Wastewater discharged from coal ash ponds, air pollution controls and other equipment at power plants can contaminate drinking water sources, cause fish and other wildlife to die and create other detrimental environmental effects.

Earlier this year, EPA completed a multi-year study of power plant wastewater discharges and concluded that current regulations, which were issued in 1982, have not kept pace with changes that have occurred in the electric power industry. Air pollution controls installed to remove pollution from smokestacks have cleaned the air people breathe, saving lives and reducing respiratory and other illnesses. However, some of the equipment used to clean air emissions does so by "scrubbing" the boiler exhaust with water, and when the water is not properly managed it sends the pollution to rivers and other waterbodies. Treatment technologies are available to remove these pollutants before they are discharged to waterways, but these systems have been installed at only a fraction of the power plants.

As part of the multi-year study, EPA measured the pollutants present in the wastewater and reviewed treatment technologies, focusing mostly on coal-fired power plants. Many of the toxic pollutants discharged from these power plants come from coal ash ponds and the flue gas desulfurization systems used to scrub sulfur dioxide from air emissions.

Once the new rule for electric power plants is finalized, EPA and states would incorporate the new standards into wastewater discharge permits. More information about EPA's study is provided in an interim report published in August 2008. A final study will be published later this year.

For info: www.epa.gov/waterscience/guide/steam/

CLIMATE CHANGE

US

DOI STRATEGY/ORDER

On September 14, Secretary of the Interior Ken Salazar launched the Department of the Interior's (DOI's) first-ever coordinated strategy to address current and future impacts of climate change on America's

land, water, ocean, fish, wildlife, and cultural resources. The secretarial order establishes a framework through which Interior bureaus will coordinate climate change science and resource management strategies. A new Climate Change Response Council (CCRC), led by the Secretary, Deputy Secretary and Counselor, will coordinate DOI's response to the impacts of climate change within and among the Interior bureaus and will work to improve the sharing and communication of climate change impact science, including through www.data.gov.

Eight DOI regional Climate Change Response Centers — serving Alaska, the Northeast, the Southeast, the Southwest, the Midwest, the West, Northwest, and Pacific regions — will synthesize existing climate change impact data and management strategies, help resource managers put them into action on the ground, and engage the public through education initiatives. A network of Landscape Conservation Cooperatives will engage DOI and federal agencies, local and state partners, and the public to craft practical, landscape-level strategies for managing climate change impacts within the eight regions. The cooperatives will focus on impacts such as the effects of climate change on wildlife migration patterns, wildfire risk, drought, or invasive species that typically extend beyond the borders of any single National Wildlife Refuge, BLM unit, or National Park.

In addition to coordinating DOI's response to the impacts of climate change, the CCRC will oversee the DOI Carbon Storage Project, through which the Department of the Interior is developing methodologies for both geological (i.e., underground) and biological (e.g., forests and rangelands) carbon storage, and the DOI Carbon Footprint Project, through which DOI will develop a unified greenhouse gas emission reduction program, including setting a baseline and reduction goal for the Department's greenhouse gas emissions and energy use. The Secretarial Order builds on Secretarial Order No. 3285, issued March 11, 2009, which prioritized development of renewable energy on public lands and offshore waters in order to reduce the country's dependence on foreign oil and to reduce greenhouse gas pollution.

For info: Secretarial Order available at: www.doi.gov/climatechange/

WATER BRIEFS

BASIN STUDIES**WEST****RECLAMATION PROGRAM**

Reclamation Commissioner Michael L. Connor has announced the implementation of a new Basin Study Program that will better define options for future water management of Western river basins where climate change, record drought, population increases and environmental needs have heightened competition for scarce water supplies. Each study will include state of the art projections of future water supply and demand on a basin-wide scale, including an assessment of the impacts of climate change on water resources; analysis of how the basin's existing water and power operations and infrastructure will perform in the face of changing water realities; and recommendations on how to optimize operations and infrastructure to supply adequate water and power in the future while accounting for environmental values. Reclamation will provide a 50% cost share contribution to state, local and tribal partners to implement the studies.

THE THREE STUDIES INCLUDE:

Colorado River Basin Water Supply and Demand Study (\$1 million Reclamation, \$1 million matching) covering portions of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming
Yakima River Basin Study and Associated Basin Restoration Implementation Plan, covering south central Washington (\$1.3 million Reclamation, \$1.3 million matching)
Modeling for the Future of the Milk and St. Mary River Systems in Montana (\$350,000 Reclamation, \$350,000 matching)

The Basin Study Program will incorporate the latest science, engineering technology, climate models and innovative approaches to water management. Options that will be evaluated in the studies include changes to the operation of water supply systems, modifications to existing facilities, development of new facilities, and non-structural strategies. The basin studies will generally last two years.

The Program announcement follows Secretary of the Interior Ken Salazar's signing of a Secretarial Order in September (see previous Brief) which details Interior's coordinated strategy to address the current and future impacts of climate change on America's diverse natural resources,

including water. The Program is part of the Water Conservation Initiative (WCI) and a key element of Reclamation's implementation of the SECURE Water Act, which was enacted into law as part of the Omnibus Public Land Management Act of 2009. Components of the WCI include: providing competitive financial assistance for water conservation; efficiency and marketing projects and other activities that enhance water management; conducting basin-wide planning studies that will address the impacts of climate change; and continued funding of water reuse and recycling projects.

For info: Kip White, Reclamation, 202/513-0684

PRIORITY CONTAMINANTS US**EPA DRINKING WATER LIST**

EPA has released its third list of drinking water contaminants that are known or anticipated to occur in public water systems and may require regulation. EPA will continue to evaluate and collect data on the contaminants. By 2013 EPA will determine whether or not to propose new drinking water regulations.

This third contaminant candidate list (CCL 3) includes 104 chemical contaminants or groups and 12 microbes, including: contaminants; pesticides; disinfection byproducts; pharmaceuticals; chemicals used in commerce; waterborne pathogens; and algal toxins. EPA's selection of the contaminants builds upon evaluations used for previous lists and is based on expert input from different groups including stakeholders, the National Research Council and the National Drinking Water Advisory Council. EPA will make regulatory determinations for at least five contaminants in accordance with the Safe Drinking Water Act. For those CCL 3 contaminants that lack sufficient information for a regulatory determination by 2013, EPA will encourage research to provide the information needed.

EPA evaluated approximately 7,500 chemicals and microbes and selected 116 candidates for the final list based on their potential to pose health risks through drinking water exposure. The agency considered the best available health effects and occurrence data and information. A draft CCL 3 was published for review and comment on

February 21, 2008. EPA analyzed the information provided in the comments in developing the final CCL 3.

For info: www.epa.gov/safewater/ccl

DAM REMOVAL**CA/OR****KLAMATH HYDROELECTRIC SETTLEMENT**

PacifiCorp, local, state, tribal and federal partners have reached a draft agreement on a proposal to remove four dams on the Klamath River in Oregon and California, Secretary of the Interior (Interior) Ken Salazar announced. The draft Klamath Hydroelectric Settlement Agreement, announced September 30, will now be presented to the public for review and to the negotiating parties' respective boards, commissions, and councils for final approval. Steve Rothert, California Director for American Rivers, said that "With this agreement from PacifiCorp, the finish line is in sight. When the Klamath dams come down it will be the biggest dam removal project the world has ever seen." The Settlement includes provisions for the interim operation of the dams and the process to transfer, decommission, and remove the dams.

The agreement requires PacifiCorp customers to contribute up to \$200 million for dam removal and river restoration (initial surcharge set to collect \$158 million from PacifiCorp's Oregon customers and \$14 million from PacifiCorp's California customers). Oregon has already passed the law necessary to authorize the collection of the Oregon share. If project costs exceed this amount, up to an additional \$250 million would come from the sale of bonds in California (the Agreement sets a "cost cap" of \$450 million for facilities removal).

Estimates of dam removal and river restoration costs range from \$75 million to \$175 million. The agreement calls for Interior to oversee further due diligence to refine removal costs and confirm by 2012 that dam removal and river restoration is in the public interest. The agreement also includes the following: PacifiCorp agrees to modify project operations and fund activities to mitigate project impacts and protect restoration of the Klamath and its tributaries until the dams are removed; once Interior determines dam removal is in the public interest and project permits are obtained, PacifiCorp will transfer the dams to the federal

WATER BRIEFS

government for the purpose of dam removal; Federal legislation will protect PacifiCorp against any liability that arises from dam removal, but PacifiCorp will retain liability for the effects of project operations since constructing the first dam in 1908; and the County of Siskiyou would receive up to \$20 million to mitigate any possible adverse impacts to the county revenues.

Preparatory work for facilities removal may be undertaken by the "Dam Removal Entity" before January 1, 2020, consistent with Interior's determination, the definite plan, applicable permits, and other provisions of the Settlement. The target date for facilities removal is December 31, 2020.

For info: Draft Agreement, a Summary, and all documents related to the Klamath Restoration Initiative are available at: www.edsheets.com/Klamathdocs.html

SEDIMENTS ACTION MT**EPA ORDER FOR WHITEFISH RIVER**

EPA ordered the removal of contaminated sediments from sections of the Whitefish River in northwestern Montana beginning in late September. The Whitefish River flows from Whitefish Lake through the town of Whitefish, in Flathead County. Sediments in certain areas of the river are contaminated with petroleum products, causing a visible sheen on the river when disturbed.

In 2007, a citizen contacted EPA to report an oily sheen on the river in multiple locations. EPA investigated the site and found the presence of petroleum consisting of bunker fuel oil and weathered diesel fuel. The river is not a drinking water source for the town, but is used for recreational activities. The known contamination appears to originate from the Burlington Northern Santa Fe (BNSF) fueling facility, which is located upstream from the town adjacent to the river. Areas of contaminated sediments continue along the river for about two miles as the river flows through the town of Whitefish. BNSF will investigate, conduct and pay to clean up contamination that is attributable to them, with EPA oversight.

In late September, BNSF was scheduled to begin cleaning up contaminated areas along the upper reach of the river, above the Second Street Bridge, north to the BNSF

facility, adjacent to the river. EPA and BNSF will investigate a recovery trench system on BNSF property to evaluate whether the trench is effectively preventing oil from entering the river. In 2010, BNSF will begin to remove impacted sediments in the lower reach of the river, downstream of Second Street Bridge, for approximately two miles. EPA will also investigate additional potential petroleum sources on BNSF property at that time.

For info: Jennifer Chergo, EPA, 303/312-6601 or chergo.jennifer@epa.gov

**CONTAMINATION STUDY WA
BELLINGHAM TOXICS SITE**

Work recently began on the Georgia-Pacific West cleanup site to begin installing test wells and taking soil samples. The work marks the beginning of a comprehensive environmental study required by a legal agreement between the Washington State Department of Ecology (Ecology) and the Port of Bellingham (Port) entered into on August 25. The order requires the Port to conduct a comprehensive environmental study of the site (remedial investigation) and analyze cleanup options (feasibility study), with Ecology oversight.

Aspect Consulting is performing the work for the port. Ecology is overseeing cleanup activities at the site under the state cleanup law, the Model Toxics Control Act. Crews will analyze samples to characterize soil and groundwater conditions, identifying the location and concentration of contaminants. The samples were expected to turn up mercury, metals, petroleum hydrocarbons and other industrial contaminants, including chromium and formaldehyde.

The bulk of the cleanup site is made up of former Georgia-Pacific property, now owned by the Port of Bellingham. The 64-acre property at 300 W. Laurel Street was used to manufacture paper from 1925 to 2007. The Port of Bellingham acquired the former industrial site in January 2005. The site is one of 12 cleanup sites in the Bellingham Bay Demonstration Pilot, a multi-agency collaborative effort to integrate cleanup, control of pollution sources, habitat restoration and land use. The pilot program is a major step toward restoring Puget Sound, and it is a model for other large-scale cleanups.

For info: Lucy McNerney, Ecology, 425/ 649-7272, lpeb461@ecy.wa.gov or www.ecy.wa.gov/programs/tcp/sites/blhm_bay/sites/gpWest/gpWest_hp.htm

WATER QUALITY GUIDE MT

The Water Policy Interim Committee staff (Montana Legislature) recently updated "A Guide to Water Quality in Montana." The Guide is an easy to understand reference booklet on the complex area of water quality.

For info: Montana Environmental Policy Office, 406/ 444-3742 or email: mtheisen@mt.gov

NPDES VIOLATION AK**EPA ENFORCEMENT ACTION**

Teck Alaska, Inc., owner and operator of the Red Dog lead and zinc mine near Kotzebue, Alaska, has agreed to pay a \$120,000 civil penalty issued by EPA for alleged Clean Water Act violations.

The settlement includes a Consent Agreement and Final Order (CAFO) signed by Teck Alaska, Inc., which resolves National Pollutant Discharge Elimination System (NPDES) permit violations and unpermitted discharges at the Company's mine and port sites.

Case documents illustrate violations that include the failure to collect representative samples of the effluent discharged, exceedances of the facility's NPDES permit's effluent limits, and discharges of unpermitted wastewater to the tundra near the Port.

According to Edward Kowalski, Director of EPA's Office of Compliance and Enforcement in Seattle, strictly complying with the Clean Water Act is a critically important part of any responsible mining operation. "By minimizing environmental impact and strictly complying with all permits, Teck Alaska can contribute to the local and national economy without forcing Alaskans to sacrifice their water quality in the process," said Kowalski.

The CAFO was effective immediately and the \$120,000 penalty payment is due in full within 30 days of September 4, 2009. By agreeing to and signing the Order, the Company neither admits nor denies the factual allegations set forth in the document.

For info: Mark MacIntyre, EPA Region 10, 206/ 553-7302 or email: macintyre.mark@epa.gov

WETLAND BANKING: NEW MITIGATION RULE WA

The Washington Department of Ecology (Ecology) has adopted a new rule that establishes criteria and a certification process for wetland mitigation banks across the state. The final rule contains provisions to ensure mitigation bank sites comply with and support local shoreline regulations as well as support local salmon recovery, surface water recovery, and watershed management plans. "We also want to ensure that wetland banks are compatible with working farms," Lauren Driscoll, who oversees Ecology's wetland mitigation banking program, said. "The rule includes considerations for locating and designing banks so that they don't adversely affect adjacent farmland."

The availability of wetland credits doesn't eliminate or change state and federal regulations requiring developers to avoid and minimize wetland damage. Wetland mitigation banks allow developers to provide compensation before harming a wetland at another site by purchasing "credits" from the banks — subject to regulatory approval — to offset wetland losses that cannot be avoided.

Ecology has already certified eight wetland mitigation banks across the state — and another six are in the certification process. There also are four other non-Ecology certified wetland mitigation banks operating in Washington.

For info: www.ecy.wa.gov/programs/sea/wetlands/mitigation/banking/

CALENDAR

October 15 CA

Water Quality Regulation & Permitting Course, Davis. Da Vinci Bldg. For info: UC Davis Extension, 800/ 752-0881 or website: <http://extension.ucdavis.edu>

October 15 WA

Large Scale Ecosystem Restoration in an Era of Rapid Climate Change: Focus on the Pacific NW, Seattle. NOAA's Sand Point Auditorium Bldg. 9. ID Required at Gate. For info: Jessica Saffell, EPA, 206/ 553-0542 or saffell.jessica@epa.gov

October 15 OR

Native Nations & Climate Change: Building an Ethics of Environmental Stewardship, Eugene. Knight Law Ctr, Rm.110, 4:30pm. For info: Jill Forcier, 541/ 346-3845 or jillf@uoregon.edu

October 15 WA

Urban Stormwater Modeling Using Western Washington Hydrology Model, Seattle. Brown & Caldwell, 701 Pike Street, #1200. Sponsored by American Society of Civil Engineers. For info: Joshua Phillips email: joshua.civil@gmail.com

October 15-16 UT

Utah Water Law Seminar, Salt Lake City. Marriott Downtown. For info: CLE International, 800/ 873-7130 or website: www.cle.com

October 15-16 WA

Measuring Environmental, Social & Economic Performance Course, Seattle. For info: NWETC, 206/ 762-1976 or website: <http://nwetc.org>

October 15-18 CA

Environmental Law Conference at Yosemite, Fish Camp. Tenaya Lodge at Yosemite. Sponsored by the Environmental Law Section - State Bar of California. For info: Bar website: www.calbar.ca.gov/

October 16 CA

Habitat Conservation Plan Implementation Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, 800/ 752-0881 or website: <http://extension.ucdavis.edu>

October 16 CO

Groundwater 101: Technical & Engineering Program Series, Denver. CLECI Large Classrm, 1900 Grant Street. Sponsored by State BAR of Colorado. For info: www.cobar.org or www.metrocorpounsel.com

October 19 WA

Fundamental Contaminant Chemistry Course, Seattle. For info: NWETC, 206/ 762-1976 or website: <http://nwetc.org>

October 19-20 CO

Colorado Water Law Seminar, Denver. Sponsored by Colorado Water Congress. For info: CWC website: www.cowatercongress.org

October 19-23 WA

Contaminant Chemistry, Transport, Fate & Remediation in Soil & Groundwater, Seattle. For info: NWETC, 206/ 762-1976 or website: <http://nwetc.org>

October 20-21 WA

Contaminated Site Assessments for Remedial Investigations Course, Seattle. For info: NWETC, 206/ 762-1976 or website: <http://nwetc.org>

October 20-21 B.C.

The Ecology of Pacific Salmonids Course, Vancouver, B.C. For info: NWETC, 206/ 762-1976 or website: <http://nwetc.org>

October 20-22 CO

Environmental Site Restoration/ Mitigation Course, Denver. For info: NWETC, 206/ 762-1976 or website: <http://nwetc.org>

October 21 CA

Groundwater Law & Hydrology Course, Davis. Da Vinci Bldg. For info: UC Davis Extension, 800/ 752-0881 or website: <http://extension.ucdavis.edu>

October 21 OR

Willamette River Sediment Investigation ODEQ Public Meeting, Portland. John Ross Plaza Studio, 3623 SW River Pkwy, 6-8pm. For info: Keith Johnson, ODEQ, 503/ 229-6431, email: Johnson.keith@deq.state.or.us or www.deq.state.or.us/lq/cu/nwr/willametteriver.htm

October 21 CO

Radically Rethinking Climate Policy & the Implications for Low Carbon Energy, Boulder. UC - UMC Rm. 235, 8:30-10:30am. Sponsored by the Renewable & Sustainable Energy Institute. For info: <http://rasei.colorado.edu>

October 21-22 CO

A River Odyssey: 1989 to 2029 Conference, Berthoud. For info: Jennifer Brown, South Platte Forum, 402/ 960-3670, email: jennifer@jbbrown.com or website: www.southplatteforum.org

October 21-22 CA

Introduction to the California Environmental Quality Act Course, Oakland. For info: NWETC, 206/ 762-1976 or website: <http://nwetc.org>

October 21-22 GA

NEPA: Writing the Perfect EA/FONSI or EIS Course, Atlanta. For info: NWETC, 206/ 762-1976 or website: <http://nwetc.org>

October 21-22 OR

Upstream Fish Passage - Fish Behavior, Engineering & Related Considerations Course, Umatilla. For info: NWETC, 206/ 762-1976 or website: <http://nwetc.org>

October 22 CA

Solar Power Project Development, San Diego. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

October 22-23 AZ

Water & Land for Renewable Energy in the Southwest, Tucson. Marriott University Park Hotel. Sponsored by Southwest Hydrology. For info: Conf. website: www.swhydro.arizona.edu/renewable

October 22-23 WA

Applications of Monitored Natural Attenuation for Remediation of Petroleum & Chlorinated Hydrocarbons in Soil & Groundwater, Seattle. For info: NWETC, 206/ 762-1976 or website: <http://nwetc.org>

October 23 OR

Sustainability & Green Building for Commercial & Governmental Growth, Portland. World Trade Center, 121 SW Salmon. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

October 23 NC

Next Generation Conservation: Government's Role in Emerging Ecosystem Service Markets, Durham & Webcast. Duke School of Law. Sponsored by Duke Environmental Law & Policy Forum & Office of Ecosystem Services & Markets (US Dept. of Agriculture). For info: www.law.duke.edu/journals/delp/symposium

October 23-24 NV

2nd Annual International Conference on Energy, Logistics & the Environment, Las Vegas. The Mirage Hotel. For info: www.globalcommerceforum.org

October 25-27 WY

Western Legislatures, Sustainable Futures: Western States Energy & Environment Symposium, Jackson. Teton Village. Sponsored by Wyoming State Legislature. For info: Conf. website: www.wsees.com

October 26 OR

Saving Water, Saving Energy: Climate Change & Protecting Rivers Workshop, Portland. For info: River Network, 503/ 241-3506 or <http://rivernetwork.org>

October 26-27 OK

International Water Technologies for Emerging Regions (WaTER) Conference, Norman. University of Oklahoma. For info: OU, 405/ 325-5913, email: sabatini@ou.edu or website: <http://water.ou.edu>

October 26-28 OR

Assoc. of State Drinking Water Administration Meeting, Portland. For info: ASDWA, 703/ 812-9505, email: dmason@asdwa.org or website: www.asdwa.org

October 26-29 NV

Preserving Endangered Lakes Through Research, Reno. University of Nevada, Reno. RE: Closed-basin Lakes. For info: www.nevada.edu/symposium

October 26-30 WA

Wetland Delineation Intensive - UW Engineering Program, Bothell. UW Bothell. For info: UW Engineering website: www.engr.washington.edu/epp/cee/wet.html

- October 27 WA**
The Municipal Water Law, Litigation & the Effects on Conservation, Bellevue. City Hall, 450 110th Ave.NE. Sponsored by Partnership for Water Conservation. For info: PWC, 206/ 957-2199 or email: info@partners4water.org
- October 27-30 OR**
Oregon Watershed Council Gathering, Klamath Falls. Running Y Ranch. Sponsored by Network of Oregon Watershed Councils. For info: Ben Lubbers, 541/ 682-8323 or website: www.oregonwatersheds.org/
- October 28 CA**
EIR/EIS Preparation & Review Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, 800/ 752-0881 or website: http://extension.ucdavis.edu
- October 28-29 MT**
5th Northwest Tribal Water Rights Conference, Polson. For info: Center for Water Advocacy, 541/ 377-0960 or website: www.wateradvocacy.org/id56.html
- October 28-30 WA**
Hydrogeomorphic Methodology for the Functions of Water & Its Applications, Seattle. For info: NWETC, 206/ 762-1976 or website: http://nwetc.org
- October 28-30 AZ**
Western Coalition of Arid States Fall Conference: ABC's of Sustainability of Water & Wastewater in the 21st Century, Tucson. Westward Look Resort. For info: WESTCAS, 770/ 424-8111 or www.westcas.org/
- October 28-30 WA**
Pacific Salmonid Recovery Conference 2009, Seattle. Warren G. Magnuson Park, 7400 Sand Point Way NE. For info: NWETC, 206/ 762-1976 or website: http://nwetc.org
- October 29 MT**
Water Rights Training: New Water Appropriations Permitting & Change Applications, Kalispell. Flathead Valley Community College, Arts & Tech Bldg, 745 Grandview Dr. Sponsored by Montana Watercourse & DNRC. For info: Janet Bender-Keigley, Montana Watercourse, 406/ 994-6671, email: jkeigley@montana.edu or www.mtwatercourse.org
- October 29 WA**
The Mighty Columbia Seminar, Seattle. Grand Hyatt. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net
- October 29 WA**
Environmental Coalition of South Seattle' 16th Annual Benefit, Seattle. Herban Feast. For info: Elise, ECOSS, 206/ 767-0432, email: Elise@ecoss.org or www.ecoss.org
- October 29-30 WA**
Assessing the Ecological Functions of Streams & Wetlands, Seattle. NWETC Hdqtrs, 650 South Orcas Street. For info: NWETC, 206/ 762-1976 or website: http://nwetc.org
- October 30 WA**
Source Control & Stormwater Management Conference, Seattle. For info: Holly Duncan, Environmental Law Education Center, 503/ 282-5220, email: hduncan@elecenter.com or website: www.elecenter.com
- October 30 OR**
2009 Governmental Law Update, Tigard. Oregon State Bar Ctr. Video Replays at Other Locations. For info: www.osbarcle.org/Brochures/2009/GOV09.pdf
- November 1-5 OR**
Estuaries & Coasts in a Changing World: Coastal & Estuarine Research Federation 20th Biennial Conference, Portland. For info: Conf. website: www.sgmt.com/cerf2009/
- November 1-7 CA**
Pacific Fishery Management Council Meeting, San Diego. Town & Country Resort & Convention Center. For info: Dr. Donald McIsaac, PFMC, 866/ 806-7204, email: Donald.McIsaac@noaa.gov or website: www.pcouncil.org
- November 2-3 CA**
Petroleum Hydrocarbons & Organic Chemicals in Groundwater: Prevention, Detection & Remediation Conference, Costa Mesa. For info: NGWA, 800/ 551-7379 or website: www.ngwa.org
- November 2-4 CA**
Stormwater Management - Challenges & Solutions, San Diego. Hilton at Mission Bay. California Stormwater Quality Assoc. 5th Annual Conference. For info: CASQA, 650/ 366-1042 or www.casqa.org
- November 3-4 CO**
Monitored Natural Attenuation: Mechanisms, Site Characterization, Evaluation & Monitoring Course, Denver. For info: NGWA, 800/ 551-7379 or website: www.ngwa.org
- November 3-4 NV**
2009 Truckee River Symposium, Reno. For info: NVWRA, 775/ 473-5473 or website: www.nvwra.org/
- November 3-5 OK**
Oklahoma Governor's Water Conference and Water Research Symposium, Midwest City. Sheraton-Reed Conference Ctr. For info: OWRB website: www.owrb.ok.gov/news/waterconference.php
- November 3-5 WV**
Fourth Mid-Atlantic Stream Restoration Conference, Morgantown. Waterfront Place Hotel. For info: Canaan Valley Institute website: www.canaanvi.org/
- November 4 CA**
Groundwater Withdrawal-Induced Land Subsidence in the San Joaquin Valley, Fresno. Radisson Hotel & Conf. Ctr. Sponsored by GRAC & AEG San Joaquin Chptr. For info: Conf. website: www.grac.org/sanjoaquin.asp
- November 4-6 WA**
Water & Land Use in the Pacific NW: Integrating Communities & Watersheds Conference, Stevenson. Skamania Lodge. Sponsored by Pacific Northwest Water Program. For info: Diane Weber, Washington Water Research Center, 509/ 335-5532, email: weberd@wsu.edu or website: www.swwrc.wsu.edu
- November 4-6 NM**
Quivira Coalition's 8th Annual Conference, Albuquerque. For info: Quivira Coalition, 505/ 820-2544 or www.quiviracoalition.org
- November 4-6 WA**
Water Quality Sampling & Design Course, Seattle. NWETC Hdqtrs, 650 South Orcas Street. For info: NWETC, 206/ 762-1976 or website: http://nwetc.org
- November 4-6 WA**
11th Int'l Conference on Estuarine & Coastal Modeling, Seattle. The Grand Hyatt. For info: Conf. website: www.oce.uri.edu/ecm11/
- November 4-6**
Environmental Site Restoration/ Mitigation Course, Vancouver, B.C.. For info: NWETC, 206/ 762-1976 or website: http://nwetc.org
- November 5 DC**
Wetlands Law & Regulation Conference, Washington. AED Conf. Ctr. For info: WWW.ali-aba.org/CR026
- November 5-6 FL**
Florida Wetlands Seminar, Tampa. For info: CLE International, 800/ 873-7130 or website: www.cle.com
- November 5-6 OR**
Oregon Water Law - 18th Annual Seminar, Portland. World Trade Center, 121 SW Salmon (Bldg.2). For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net
- November 5-6 CA**
NEPA: Writing the Perfect EA/FONSI or EIS Course, Pasadena. For info: NWETC, 206/ 762-1976 or website: http://nwetc.org
- November 5-6 CO**
Advanced Data Analysis Techniques for Evaluating & Quantifying Natural Attenuation Course, Denver. For info: NGWA, 800/ 551-7379 or website: www.ngwa.org
- November 5-6 ID**
Water Law & Resource Issues Seminar - 26th Annual, Boise. DoubleTree Riverside. Sponsored by Idaho Water Users Assn. For info: www.iwua.org
- November 5-6 CA**
Endangered Species Act Seminar, San Francisco. For info: CLE International, 800/ 873-7130 or website: www.cle.com
- November 5-6 CA**
California Water Law Seminar, Palm Springs. For info: CLE International, 800/ 873-7130 or website: www.cle.com
- November 5-6 CA**
Habitat Restoration: Intensive Workshop, Davis. Da Vinci Bldg. For info: UC Davis Extension, 800/ 752-0881 or website: http://extension.ucdavis.edu
- November 6 DC**
Species Protection: Critical Legal Issues Conference, Washington. AED Conf. Ctr. For info: WWW.ali-aba.org/CR021
- November 7 OR**
Engineers Without Borders 4th Annual Banquet, Corvallis. Benefit for El Salvador Water Project. For info: Kelly Kibler, 503/ 507-1095, osu.web@gmail.com or Http://groups.engr.orst.edu/ewb/
- November 7 OR**
A Celebration of Oregon Rivers, Portland. Ambridge Event Center. For info: WaterWatch of Oregon, 503/295-4039 x207 or website: www.waterwatch.org
- November 7 WA**
Give Water Give Life Benefit, Seattle. Washington State Trade & Convention Center. Benefit for Water 1st Int'l. For info: www.water1st.org/events/GWGL_2009.html
- November 9-12 WA**
45th Annual Water Resources Conference, Seattle. Red Lion Hotel. Sponsored by American Water Resources Assn & WA Section. For info: AWRA website: www.awra.org/meetings/Seattle2009/
- November 12 OR**
Carbon Credits Seminar, Portland. World Trade Center, 121 SW Salmon. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net
- November 12 NV**
Water Rights in Nevada Seminar, Yerington. Lyon County Library. Sponsored by Nevada Water Resources Assn. For info: NVWRA, 775/ 473-5473 or website: www.nvwra.org/
- November 12-13 CA**
San Joaquin River Restoration Tour, Fresno. Sponsored by Water Education Foundation. For info: WEF website: www.watereducation.org/
- November 13 NV**
Advanced Water Rights in Nevada, Yerington. Lyon County Library. Sponsored by Nevada Water Resources Association. For info: NVWRA, 775/ 473-5473 or website: www.nvwra.org/
- November 13 WA**
Low Impact Development Seminar, Seattle. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net
- November 15-19 WA**
AWWA Water Quality Technology Conference & Exposition, Seattle. Washington State Trade & Convention Center. For info: Conf. website: www.awwa.org/Conferences/



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CALENDAR

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November 16 **OR**

Advanced Sediment Conference, Portland. For info: Holly Duncan, Environmental Law Education Center, 503/ 282-5220, email: hduncan@elecenter.com or website: www.elecenter.com

November 16-17 **CA**

Conservation Easements Seminar, San Francisco. For info: CLE International, 800/ 873-7130 or website: www.cle.com

November 16-17 **CA**

Eminent Domain Seminar, San Francisco. For info: CLE International, 800/ 873-7130 or website: www.cle.com

November 16-18 **LA**

National Brownfields 2009 Conference, New Orleans. Morial Convention Ctr. For info: www.Brownfields2009.org

November 17 **OR**

DEQ Toxics Reduction Workshop, Portland. The Ambridge, 1333 Martin Luther King, Jr. Blvd.. Sponsored by Oregon DEQ. For info: Chris Gannon, DEQ, 503/ 229-5622 or www.deq.state.or.us/WQ/SB737/toxicsworkshop.htm

November 17-18 **DC**

Carbon Economy: New Opportunities for Green Business, Washington. For info: The Economist website: <http://carboneconomy.economist.com/>

November 17-19 **MT**

68th Annual Convention of the Montana Assoc. of Conservation Dists., Lewistown. For info: Jeff Tiberi, 406/ 465-8813 or email: jtiberi@macdnet.org

November 18 **WA**

Changes Affecting Hydropower Projects Seminar, Seattle. Washington State Trade & Convention Center. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

November 18 **OR**

Model Toxics Control Act Seminar, Portland. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com

November 18-19 **WA**

Construction Site Erosion & Pollution Control, Bellevue. UW Bellevue. For info: UW Engineering website: www.engr.washington.edu/epp/cee/wet.html

November 18-19 **CA**

Stormwater Regulations in California Course, San Diego. For info: NWETC, 206/ 762-1976 or website: <http://nwetc.org>

November 23-24 **Brazil**

Water, Innovation, Technology & Sustainability Conference, Manaus. Organized by UNM School of Management. For info: UNM website: <http://witsmanus.mgt.unm.edu/>

December 1-4 **CA**

Assn of California Water Agencies Fall Conference, San Diego. Town & Country Resort. For info: ACWA, 916/ 441-4545 or website: www.acwa.com

December 1-4 **OR**

OWRC 2009 Annual Conference, Hood River. Hood River Inn. Sponsored by Oregon Water Resources Congress. For info: OWRC, 503/ 363-0121 or www.owrc.org

December 1-4 **France**

Pollutec 1009 Paris: Environmental Tech Trade Show, Paris. For info: Contact: www.envirodirectory.com/

December 2 **WA**

Solar Power Seminar, Seattle. For info: The Seminar Group, 800/ 574-4852, email: info@theseminargroup.net, or website: www.theseminargroup.net

December 2-4 **TX**

30th Annual International Irrigation Show, San Antonio. Henry B. Gonzalez Convention Ctr. For info: Irrigation Assn website: www.irrigation.org

December 3 **OR**

Water Rights Academy, Bend. Bend Riverhouse, 3075 N. Business 97. Sponsored by Water for Life & Schroeder Law Firm. For info: Helen Moore, WFL, 375-6003, email: helen.moore@waterforlife.net or website: www.waterforlife.net

December 3 **OR**

The Natural Step for Sustainability Workshop, Salem. For info: April Knudsen, The Natural Step Network, 503/ 241-1140 x1# or www.thenaturalstep.org/usa

December 3-4 **CO**

NEPA Seminar, Denver. For info: CLE International, 800/ 873-7130 or website: www.cle.com

December 3-4 **NM**

Land Use Law Seminar, Albuquerque. For info: CLE International, 800/ 873-7130 or website: www.cle.com

December 4 **OR**

Willamette River Conference, Portland. For info: Holly Duncan, Environmental Law Education Center, 503/ 282-5220, email: hduncan@elecenter.com or website: www.elecenter.com

December 4 **CA**

Water Resources Planning & Urban Growth Course, Sacramento. Sutter Square Galleria, 2901 K Street. For info: UC Davis Extension, 800/ 752-0881 or website: <http://extension.ucdavis.edu>

December 7-8 **OR**

Northwest Environmental Conference & Tradeshow, Portland. Red Lion Hotel on the River. Presented by Assoc. Oregon Industries, ODEQ, NEBC & Wash. Dept. of Ecology. For info: NEBC, 503/ 227-6361 or website: www.nebc.org